WEGENKE, Gary Lee, 1938-
A STUDY OF THE DESIGN AND DEVELOPMENT OF A
SIMULATION MODEL FOCUSED ON EDUCATIONAL
EVALUATION AND DECISION MAKING.

The Ohio State University, Ph.D., 1971
Education, administration

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1971
A STUDY OF THE DESIGN AND DEVELOPMENT OF A
SIMULATION MODEL FOCUSED ON EDUCATIONAL
EVALUATION AND DECISION MAKING

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

By
Gary L. Wegenke, A.B., M.S.

* * * * * *

The Ohio State University
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Some Pages have indistinct print. Filmed as received.

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ACKNOWLEDGMENTS

A study of this nature is not completed in isolation of others. Contributors to the study have not only aided in its completion, but also in the education of the writer. It is conceivable that any set of acknowledgments would be incomplete. Nevertheless, I wish to acknowledge the unique contributions of those who advised, persisted, and offered general support during the process of completing the study. I extend appreciation to: Professors I. Carl Candoli, Daniel L. Stufflebeam, and Robert L. Lange, my reading committee, for their critiques, suggestions, and general guidance. Robert L. Hammond, now Assistant Superintendent, State Department of Public Instruction, Helena, Montana, for his direction and support during the time period the simulation was created.

The personnel at The Ohio State University Evaluation Center who provided clerical assistance in preparing the manuscript: Mary Whaphum, Carma Hodson, and Jeanne Thissen; and Grace Van Atta for her editorial suggestions.

My wife Sandra who, in her professional role, assisted in typing the final manuscript and in supporting changes in my career; in her wifely role offered encouragement; and in her motherly role ably filled the many vacuums left by a busy father.

Finally, to my sons, Bart and Bret, for their youthful understanding and patience expressed during this period of my career.
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CHAPTER I

INTRODUCTION

Setting the Stage

There is no serious doubt as to the relevance of simulation to education. While progress is being made in the application of simulation procedures to education, a host of problems still need to be resolved before we can really determine the full impact in the educational arena. We have no clear idea of the nature or range of applicability . . . 1

The nature or range of applicability of using simulation as an instructional media could be narrowed and tested on issues confronting educational administrators and evaluators in terms of the decision-making process. Phi Delta Kappa, a professional educational fraternity, recognized the possibility of placing evaluation and decision-making theory into simulated practice by delegating the following charge to The Ohio State University and its Evaluation Center.

The 11th Annual Phi Delta Kappa Research Symposium will focus on problems of installing and operating evaluation systems. Pairs of administrators and evaluators will be invited to attend . . . The participants will be oriented to a theoretical approach to evaluation . . . Participants will try out the new approach via . . . simulation.2

Not only does a need exist for applying simulations to various educational issues, problems, and concerns, but also as Twelker states,


"We do not have available models of simulation design that might guide the developers as they specify what form and shape the simulation is to take. . . ." A listing of educational developers who could use simulation as a method of instruction if process models were available might include elementary school to college teaching and administrative personnel. A common dilemma of individuals on the potential list of simulation developers, according to Twelker, is

Time and again, individuals attending conferences or workshops on simulation express their inability to 'get started,' and they don't. One person expressed it this way: 'Do I have to wait for commercial outfits to produce simulations? If not, how do I start to design one? Who can help me? What is available that will lead me step by step through the process?'

Coupled with the lack of a model to follow, developers many times find other constraints equally as damaging to their desire to pursue simulation interests. A few of the disconcerting factors surrounding the design and development of a simulation are (1) minimal project budget, (2) a lack of readily available trained personnel, (3) a small project support staff, and (4) a short time period for completing the project.

Given the preceding enumerated barriers to success, plus the absence of a simulation process model related to educational evaluation and decision making, the Evaluation Center's staff accepted the Phi Delta Kappa Study Commission's challenging objective which read, "To develop and test a simulation game based upon the Commission's proposed approach

---

3 Twelker, Instructional Simulations, foreword.

to evaluation and applied to problems of curriculum development in language development."

Problem

Statement of the Problem

The problem is twofold. First, could a simulation exercise designed to orient evaluators and educational administrators to the CIPP Evaluation Model be developed within a ten-month time period, with a small core staff, and within a low budgetary operating fund? Second, could a simulation development procedure be designed that has potential for guiding future simulation development?

Purpose of the Study

The purpose of this study was to design and develop a simulation model involving two foci:

1. Orienting administrators and evaluators to education evaluation and decision making.

2. Sequencing steps (process) followed in producing the final product.

Need for the Study

In this era of newly developing theories of educational evaluation and decision making relating to public school accountability issues, a need exists to confront the issues in arenas other than "under fire" and "lecture" type settings. One such arena is the classroom where

5Phi Delta Kappa Study Commission on Evaluation, "Objectives for the 11th Phi Delta Kappa Symposium."

6CIPP Model is a term used in conceptualizing a theory of evaluation for servicing educational decision making.
educational administrators and evaluators are trained for the everyday world. The effectiveness of utilizing the classroom setting to confront educational trends, theories, and issues can be made increasingly viable to the learner if the sequencing of learning activities are placed in a hierarchial order. The sequenced cognitive levels of learning described by Bloom\(^7\) include knowledge, comprehension, application, analysis, synthesis, and evaluation. Phi Delta Kappa's Study Commission on Evaluation recognized the need for moving evaluation and decision-making theory beyond the transmitting of knowledge and comprehension stages of cognitive learning for Symposium participants. Their partial charge to the Evaluation Center's staff required the developing and testing of a simulation game which from an instructional view acknowledges Bloom's "application" level of cognitive learning. A simulation model or prototype applicable to meeting the charge was not available as a guide at the beginning of the project.

Since the presentation of the completed simulation in June, 1970, other simulation needs have emerged. The basis of these needs is The Ohio State University Evaluation Center's receiving of funds from the United States Office of Education to design new patterns for training evaluation personnel in education. A component of the model training program is an instructional materials section. The revised simulation designed and developed for the Symposium, along with the process followed in creating the simulation, will serve as major elements for project planners attempting to focus the materials development component of the three-year model training program.

Another need is for developmental studies to begin to take their place in the area of creditable educational research. Dr. William B. Michael, Professor of Education at the University of Southern California, stated in a February, 1971, address to the American Educational Research Association,

... I would also like to put a plug in for our encouraging work in evaluation, and the CIPP model presented here offers control group models and allow students to do developmental studies. They are perfectly respectable, in fact, ... control group models and allow students to do developmental studies. They are perfectly respectable, in fact, ...

In summary, needs exist in education for prototypes of developmental research design, documented step by step processes for creating simulation models, and instructional materials that supersede knowledge levels of cognitive learning for students addressing evaluation and decision-making issues.

Objectives

The objective of this study was to conduct developmental research focused on:

1. Developing a procedure or model for producing instructional simulations that can be utilized by professional educators operating under constraining conditions such as:
   a. minimal budgets,
   b. lack of trained personnel, and
   c. short time deadlines.

2. Producing and assessing a simulation model for orienting educational administrators and evaluators to the process
of evaluation and decision making with emphasis on the
CIPP Model of Evaluation.

Definitions and Limitations

Definitions

The following is a list of words and phrases used in the text of
the study which require specific clarification in terms of their use.
Those terms preceded by an asterisk (*) were taken directly from a list
of terms defined by Stufflebeam.9

Accountability. A systematic decision-making process pursued by a
decision maker in an effort to become responsible to the
audiences his decisions effect.

*CIPP. An acronym formed from the first letters of the four basic types
of evaluation found in this model. These are: context, input,
process, and product.

*Context Evaluation. Provides a rationale for determination of objectives.
Specifically, it defines the relevant environment, describes the
desired and actual conditions pertaining to that environment,
identifies unmet needs and unused opportunities, and diagnoses
the problems that prevent needs from being met and opportunities
from being used.

*Delineating. Identifying evaluative information required through an
inventory of the decision alternatives to be weighed and the
criteria to be applied in weighing them.

Educational Audience. An individual or group which is affected by a
school administrator's decisions or decision-making actions.

---

9Daniel L. Stufflebeam, "Glossary of Evaluation and Decision-
Making Terms" (unpublished list presented at 11th Phi Delta Kappa
Symposium, Columbus, Ohio, June, 1970).
*Educational Evaluation. The process of delineating, obtaining, and providing useful information for judging decision alternatives.

*Input Evaluation. Provides information for determining how to utilize resources to meet program goals. This is accomplished by identifying and assessing
1. relevant capabilities of the responsible agency,
2. strategies for achieving program goals, and
3. designs for implementing a selected strategy.

*Obtaining. Making information available through such processes as collecting, organizing, and analyzing that involve such formal means as measurement, data processing, and statistical analysis.

*Process Evaluation. Provides periodic feedback to persons responsible for implementing plans and procedures. This is accomplished by (1) identifying and monitoring on a continuous basis the potential sources of failure in a project, (2) projecting and servicing of certain identified preprogrammed decisions to be made by project managers during the implementation of a project, and (3) noting the main features of a project design, and in terms of the design, which actually takes place.

*Product Evaluation. Proposes to measure and interpret attainments not only at the end of a project cycle, but as often as necessary during the project term.

*Providing. Fitting information together into systems or subsystems that best serve the purposes of the evaluation and reporting the information to the decision maker.

Limitations

The main focus of the study will be limited to the period from
September, 1969, to June, 1970, the period of time during which the design and development of the simulation for the Phi Delta Kappa Research Symposium took place. Other information relating to subsequent status of the simulation is included in a progress report in Chapter V.

Organization of the Remainder of the Study

A survey of the related literature is presented in Chapter II. The study was focused heavily on literature and research findings after 1960 that related to simulation and its use in educational settings. Fields other than education are referenced only as a means for supplementing or broadening a particular concept or issue relating to defining, designing, and developing simulations in general. Evaluation and decision-making theory taken from the literature focused primarily on the CIPP Model of Evaluation and its applicability as content material for the developmental simulation.

Methodology and procedures utilized in this study are described in Chapter III. These included the linear developmental process schedule (sequence of activities, conditions under which development took place), guidelines established from the developmental process which focused data gathering instrument design and procedures, data collecting instruments developed, and the nature of participants and conditions surrounding the initial testing of the simulation.

Chapter IV is devoted to the display and analysis of data. Tables, graphs, and written reactions of participants as individuals and groups will be used to display feedback data related to the initial field test. Analysis of the data was accomplished by using the information displayed, and in turn, correlating it with guidelines in Chapter III.

Chapter V includes a list of recommendations for revising or
modifying the initial simulation tested. A progress report of two additional field testings of the simulation is also a section of the chapter.

A diagrammed presentation of a simulation operations model which developed as an outgrowth of the study is in Chapter VI.

The following diagram, Figure 1, represents a brief outline of the design and a tentative time schedule followed for the completion of the study.

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FIGURE 1. PROCEDURAL DESIGN
CHAPTER II

REVIEW OF THE RELATED LITERATURE

The study relied heavily on the developmental research findings for educational simulation. The selected statements and opinions by experts on educational simulation reported in the first phase of this chapter served as a focus for beginning the design and development of the simulation in the study. In reference to beginning the study, the literature reviewed can be divided into two general categories: (1) description of simulation as a method of instruction, including a consideration of its definitions, types, characteristics, advantages, disadvantages, and research problems; and (2) description of simulation from an individual or group's view of basic design and development decisions and concerns.

A second phase of Chapter II concerns theory and concepts of the CIPP Model of Evaluation and its relationship to educational decision making. The literature review is restricted to key theoretical elements found in the relationship which categorically include a description of: (1) the decision-making process; (2) decision settings; (3) decision models; (4) types of decisions; and (5) the CIPP Model. The setting for the simulation and its content were selected from the bank of theoretical elements identified.
Simulation as a Method of Instruction

Definitions

Simulation is analogy in a very general use of the word. Fitzpatrick refers to simulation as "... the symbolic or physical representation and exercising of some physical aspect of a system." Using the dictionary definition of "pretense" or "false resemblance," Beck and Monroe see an old word with a new application. "[Simulation] now means a procedure in which a model or an analog to a real situation is created for the purpose of testing or teaching." Shubik supports the application of simulation as a model stating, "A simulation of a system or an organism is the operation of a model which is a representation of the system or organism."

Twelker offers other examples concerning the broad meaning of simulation.

In social science, simulation may be either the constructing or manipulating of an operating model or it may be a representation of reality ... it may refer to a decision-making exercise structured around a model of a business operation ... an assumption of features intended to deceive.

Cruickshank's definition is representative of education's view of simulation.


11Ibid., p. 304.


simulation " . . . as the creation of realistic games to be played by participants in order to provide them with lifelike problem-solving experiences related to their present or future work."16

The words occurring most frequently in the definitions are model and game. A Teaching Research publication distinguishes by stating,

The difference between a simulation, model, and a game is simply that a simulation is a more inclusive simplified representation of some process that is to be understood by the student. A model is a theoretical representation of such a process, and a game is its formulation into a competitive activity among human players, whose outcome is decided by various combinations of skills, chance and knowledge.17

Twelker, citing Harman's review of simulation definitions, states . . . all of the definitions have in common the characteristic of substituting other elements for some or all of the real elements of the system. [Harman] suggests perhaps the simplest and most direct definition of simulation is merely the act of representing some aspect of the real world by numbers or symbols that can be easily manipulated in order to facilitate study.18

Persons using simulation may think in terms of simulation as a device as did Harman or as a technique for setting up the device. Twelker simply points to the two interpretations as accepted meanings of the word.

Applications

The most prolific users of simulation as a device facilitating learning has been the military establishment. Kersh, noting the military use through studies of Adams, Chapman, et. al., and SAGE, states,  


18Twelker, Instructional Simulation, p. 13.
Air Force officers learn to direct fighter interceptions of enemy bombers without endangering human lives and expensive equipment. They learn through actual experience in situations which approximate reality through the use of electronic computers and special electro-mechanical devices.19

Twelker estimates that "over 3,000 different simulators are being used by the military and commercial aviation. Expenditures in prototype simulation devices are set minimally at $27 million annually."20 Not all military simulations are aeronautical in nature nor are they expensive. A ten-cent pocket blinker used by the Navy for sending Morse Code messages is a form of a simulator. A listing of military uses of simulators would include: "Autospan, Caisim, Calogism, Capertism ... War Wound."21

The American Management Association developed the Top Management Decision Simulation in 1957, the first of the hundreds of games simulating the decision-making process of management. "These games exercise all aspects of management including production, marketing, and inventory control. ... a wide variety are used in industry ... to help employees practice making decisions in business so as to better understand the business."22

In education, the University Council of Educational Administration (UCEA) administered a set of situational tests, Development of Criteria of Success in School Administration (DCS), in order to obtain a better


20 Twelker, Instructional Simulation, p. 106.

21 Ibid., pp. 111-113.

22 Ibid., p. 128.
understanding of patterns of administrative behavior. In preparing background materials, information was gathered on an actual school and community. Various forms of media were used to present the materials (motion pictures, film strips, tapes, and printed materials). Jack Culbertson states:

Although the materials in the DCS project were developed for research purposes, persons who observed the test situations as well as the principals who experienced the situations frequently expressed the idea that 'these simulated materials have a great deal of promise for instructing school administrators.' Thus, a new interest in simulated materials was found, an interest which has continued to expand.23

Another use of educational simulations includes the training of student teachers and working teachers in a decision-making situation.24 A set of simulation materials focusing on educational evaluation and decision making related to a school district science problem was designed and developed by Worthen and Hock25 for evaluation workshop use. Other uses of simulation in education include training business students, nurses, dentists, and students at all levels, kindergarten through college. A complete annotated bibliographic reference of the uses of simulations was produced by Paul A. Twelker.26


26 Twelker, *Instructional Simulations*.
Types

Twelker listed three major types of simulations: (1) interpersonal-ascendent simulation, (2) machine media-ascendent simulation, and (3) non-simulation games. He explains the three by stating:

Interpersonal-ascendent simulation refers to the role playing and decision making, player-interacting simulations as typically found in such games as Consumer, Crisis, and Manchester. Interactions between learners carry a large share of the instructional burden.

Machine- or media-ascendent simulations are characterized by the instructional burden being carried largely by media (for example, slide-tapes, films, programmed instruction, computer output, and so forth).

The third category, of non-simulation games, is largely because of the number of learning games that are being developed that do not simulate a model of reality. Such games include the Nova game, Wff'n'-Proof, On-sets and Equations. [they] do not simulate any social or physical system. Yet, they do provide involvement on the part of the learner in the application of concepts and principles drawn from formal disciplines.27

Characteristics

Beck and Monroe state, "As a tool in training, simulation has four crucial characteristics:

1. It starts with an analogous situation.

2. It provides for low risk input.

3. It feeds back consequences symbolically.

4. It is replicable."28

Following is a detailed explanation of their observations:

The first characteristic, that of analogous circumstances, provides a setting in which a learner can function. The setting is equivalent to the assumptions in a scientific investigation; the 'given' in a mathematical model; the equipment and the rules in


a game; the definition of conflict and personal characteristics in role playing; and the independent variable in an experiment. In education for decision making it represents an environment in which the learner is to function, and is assumed to have enough of the characteristics of the real environment to provide practice in meeting contingencies which could occur in the learner's life.

The second characteristic insures tentative or low risk input. The learner can make a response without irrevocable commitment and without destroying the original circumstances.

Low risk input leads to the third characteristic of simulation: symbolic consequences. The simulation system tells the learner the consequences of his responses. It delivers a message without modifying the physical or psychological learning climate.

With low risk input and symbolic consequence, the whole simulation exercise is replicable, providing an opportunity for iterative procedures in arriving at best solutions.²⁹

Advantages

Twelker emphasizes the importance of simulation over more conventional forms of instruction by offering a list of seven useful and cost-justifiable considerations:

1. Simulations are appropriate when objectives emphasize emotional or attitudinal outcomes.

2. Simulations integrate affective and cognitive behavior.


4. When the objective is to represent a social or man-machine system in such a way that the learner must interact with it, the system will react to the learner's moves, and the learner can discover the effects of alternative decisions.

5. Simulation, in which a high degree of commitment may be introduced, is useful when emphasis is upon incorporation of the behavior desired within the personal domain of the learner.

6. Simulations provide an interest-sustaining mode that is particularly useful for exercising behavior, particularly under a variety of contexts.

²⁹Ibid., pp. 45-46.
Simulation is a more powerful means of placing a learner into a 'desired set' or 'perceptual frame' to sensitize and direct him.\textsuperscript{17}

Beck and Monroe argue for simulation by stating the advantages of simulation over lecture-reading methods, which include:

1. Simulation can provide experience in a wider range of educational objectives: affective as well as cognitive; process as well as content oriented; evaluation by self system criteria as well as by the instructor; and elaborated efforts of cause and effect.

2. With simulation there may be greater transfer from the training situation to the life situation.

3. Simulation provides a responsive environment which may give learners a sense of immediacy and involvement.\textsuperscript{31}

Furthering their argument, they pursue the advantages of simulation over direct experiences as follows:

1. Cost: Simulation can provide experience in a low-cost model of a high-cost environment.

2. Time Control: Simulation can provide a short-time experience and feedback in long-time processes. ... Simulation allows practice in decision-making in a timeless environment. ... 

3. Experimentation: Simulation can provide a field for practice in hypothesis formation, testing and modification. Successive strategies in problem solving can be tried on an 'unchanging' base situation.\textsuperscript{32}

Disadvantages

Twelker visualizes the shortcomings of simulation as:

1. Simulation is not so efficient when it comes to the acquisition of cognitive knowledge as measured by typical tests.

2. Simulation may cost more than conventional types of instruction.

\textsuperscript{30}Twelker, "Designing Simulation Systems," p. 68.


\textsuperscript{32}Ibid.
3. More information can be presented in less time by more traditional means of instruction.

4. Simulations are often difficult to evaluate because of the human processes that are modeled.33

Beck and Monroe suggest, "Simulation games for teaching have the same disadvantages as other systematically developed instructional programs--they are difficult to design and they are expensive."34

Research Problems

The problem of researching simulation games is the problem of using traditional research designs to measure the effectiveness of any educational innovation.35 According to Beck and Monroe, studies available indicate that as much content learning takes place in simulation game instruction.36 They also stress the point that "... content learning is not the crucial objective in simulation game instruction. The method is peculiarly suited to teaching process, particularly the decision-making process."37

The main cause for disillusionment in the research relating to simulation games has been "... a lack of precision in the statement of the objective(s) of a simulation. In some cases, none are stated. Researchers then must infer educational benefits from the game experience and develop criteria to evaluate the effectiveness of the experience."38

33 Twelker, "Designing Simulation Systems," p. 68.
36 Ibid.
37 Ibid.
38 Ibid.
Stahl's research with instructional simulation as a learning technique transcends mere cognitive learning by participants. He comments, "... the technique of instructional simulation has been primarily viewed as a means of having a learner apply some response pattern or cognitive learning to a set of circumstances, the content of which is comparable to that found in a real situation."^39 Equally important, according to Stahl, are the affective and psychomotor learning. For example, "Individuals ... who are involved in any learning situation may acquire attitudes, beliefs, and values relating to this experience."^40

Simulation from Design and Developer's View

Decisions

Cruickshank and Broadbent state that three early decisions must be made by the designer:

1. Why and how should the simulation be a part of the training system?

2. How much, if at all, will the simulation be characterized by some form of competition?

3. Will the simulation be of an open or closed loop variety?^41

The first question focuses on what part of the training system is likely to be improved or complemented by using a simulation. Following a decision on the place of simulation in a training system, the second question facing the designer is whether the simulation will contain


^40 Ibid., p. 264.

elements of competition. These elements can be interpersonal, intra-
personal, or man-machine. Cruickshank and Broadbent support the fact
that if the simulation is characterized by interpersonal competition, it
will be known as a simulation game.42

Closed and open loop feedback simulations are discussed by
Crawford.43 Cruickshank and Broadbent summarized the work by stating
that in open loop simulation,

... the trainee can be subjected to and affected by independent
variables produced during the simulation over which he has no con-
trol (e.g., heat, light, humidity, or stress). He can only respond
through internal adjustment to the conditions. ... In a closed
loop system, interaction and manipulation of variables are possible.
Most simulations in education are closed loop.44

Concerns

A major concern of simulation designers is the creation of simu-
lated instructional materials closely aligned to the reality surrounding
the particular situation or problem being simulated. Twelker suggests
that there has been too much emphasis on realism in simulated instruc-
tional materials, pointing out,

Historically, simulation designers have placed ... emphasis on
the physical appearance of the stimulus situation. Designers have
often been overly concerned with the realism of the simulation as
an important dimension and have designed simulations that resemble
as closely as possible the real situation.45

42 Ibid., p. 3.
43 Meredith P. Crawford, "Dimensions of Simulation," American
Psychologist, XXI (August, 1966), 789.
44 Cruickshank and Broadbent, Simulation in Preparing School
Personnel, pp. 3, 5.
presented at Association for Supervision and Curriculum Development
Conference, San Diego, California, April, 1968), p. 15.
Cruickshank and Broadbent noted Twelker's opposition and his support to the developer who equally concerns himself with the response dimension of the simulation.\(^{46}\) Twelker states,

> Once the designer knows what operations he wishes to teach or exercise . . . he then considers the appropriate means to bring this learning about, and this brings him to the question of what his simulation will look like. . . . In other words form follows functions.\(^{47}\)

Cruickshank and Broadbent hold that the degree of realism depends on the precision of behavior expected.\(^{48}\) The simulation designer has to make two decisions: (1) what elements of real life to include or omit and (2) how task-relevant elements are to be represented. The task elements that are irrelevant or not essential for the learning of a particular task may be considered in the context of Twelker's comment, "... elements must not be irrelevant for the conduct of the task in real life--if this were the case, simulation would be useless for instruction. The determination of which elements are task-irrelevant and which are task-relevant is closely tied to the instructional objective.\(^{49}\) A prime consideration must be in transfer of the simulation instructional experience to real life.

In determining which factors are irrelevant to learning of the task and hence subject to omission, Twelker suggests considering the

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\(^{46}\)Cruickshank and Broadbent, Simulation in Preparing School Personnel, p. 20.


\(^{48}\)Cruickshank and Broadbent, Simulation in Preparing School Personnel, p. 20.

\(^{49}\)Twelker, Instructional Simulation, p. 21.
(1) control in the instructional situation and (2) stage of training of participants. The first point relates to predicting the behavior of participants, while the second focuses on the appropriateness of additional learning considerations for a participant's particular stage of learning.50

A second major concern of simulation designers is feedback. Cruickshank and Broadbent define feedback as being "... used to refer to the return to the participant by himself or others of perceptions or sensations resulting from his reactions to or interactions with the simulation."51 They continue:

All feedback systems involving humans are behavior shaping, that is, their intention is to steer the participant onto a correct course. As such, simulations are not neutral. Participant responses are evaluated (rewarded or corrected) according to normative data. ... Since the variables at play in a real setting are almost infinite ... the norms provided are at best estimates or at times 'guesstimates.'52

Another view on feedback is provided by Cruickshank, Broadbent, and Bubb when they state,

... simulation provides a more open-ended vehicle wherein feedback is not limited to specific responses. Rather, participants working in groups value each other's responses by projecting possible consequences of the response for the child, teacher, administrator, or other.53

Kersh's classroom simulator utilized a panel or jury of experts to serve as a feedback mechanism to participants.54

50 Ibid.
51 Cruickshank and Broadbent, Simulation in Preparing School Personnel, p. 17.
52 Ibid., p. 18.
53 Cruickshank, et. al., Teaching Problems Laboratory.
54 Kersh, Classroom Simulation, p. 6.
A third concern of a simulation designer is the availability of a model or prototype on which to base or adapt his project. Twelker's model, *Steps in the Design of an Instructional Simulation System*, includes a series of thirteen steps. The steps are divided under three major design considerations: (1) determining what to teach, (2) determining how best it might be taught, and (3) validating the system.

Cruickshank and Broadbent suggest the following steps in designing and developing a simulation:

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

Other concerns of the simulation designer requiring judgments or opinions from the literature will be highlighted where applicable in relationship to other parts of the study.

*Relationship of CIPP Evaluation Model to Decision Making*

For purposes of the study the review of literature was limited to that which related evaluation to decision making as presented in Figure 2, "A Chart for Relating Evaluation to Decision Making." An explanation of the chart, in general, assumes that decision making:


<table>
<thead>
<tr>
<th>GENERAL (ALL)</th>
<th>AWARENESS</th>
<th>DESIGN</th>
<th>CHOICE</th>
<th>EVALUATION</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PLANNING</strong></td>
<td>Monitor a program to identify needs and opportunities</td>
<td>Brainstorm and develop alternatives</td>
<td>Specify the parameters of the situation</td>
<td>Assess the parameters from different viewpoints</td>
<td>Decide whether the solution will require large or small change and the degree to which information is available to support the change activities</td>
</tr>
<tr>
<td><strong>STRUCTURING</strong></td>
<td>Identify the questions that follow from the objectives</td>
<td>Consultation if requested</td>
<td>Choose the design model and fix the problem parameters</td>
<td>Consultation if requested</td>
<td>Choose the best alternative within specified bounds</td>
</tr>
<tr>
<td><strong>IMPLEMENTING</strong></td>
<td>Consultation if requested</td>
<td>Consultation if requested</td>
<td>This type of design has been programmed</td>
<td>Consultation if requested</td>
<td>Specify the procedures to be followed</td>
</tr>
<tr>
<td><strong>RECYCLING</strong></td>
<td>Consultation if requested</td>
<td>Consultation if requested</td>
<td>Specify the procedures to be followed</td>
<td>Consultation if requested</td>
<td>Program the change strategy</td>
</tr>
</tbody>
</table>

**TABLE 2**

A CHART FOR RELATING EVALUATION TO DECISION MAKING

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(1) is a process which involves four major stages (awareness, design, choice, and action), (2) occurs in four different settings (metamorphic, homeostatic, incremental, and neomobilistic), (3) may be effected by following alternative models (synoptic, incremental, and planned change), and (4) involves four major types of questions (planning, structuring, implementing, and recycling).

In this study, application of the CIPP Model of Evaluation to the chart in Figure 2 formed the basic instructional content in orienting evaluators and administrators to the theory of evaluation via simulation. Elements of CIPP and the chart provided a list of alternatives for selecting which elements should be highlighted as instructional content in the simulation which was developed. An explanation of each element in the chart which relates to the application of the CIPP Model used in the simulation follows in the review.

Decision-Making Process

1. Awareness. Stufflebeam, et al., stated that "Becoming aware that a decision is needed is the first element of the structure of decision-making." Awareness may be precipitated by an evaluation report, a memo from a superior, change in budgetary operations, a social disturbance (riot), etc. Systematic awareness that a decision is needed may be created either within an existing functioning system or outside of the system by a constant monitoring process. Awareness aids the decision maker in identifying "... programmed decision situations, unmet needs and unsolved problems, and opportunities which could be used."

59 Ibid., p. 78.
60 Ibid., p. 79.
2. **Design.** Following an awareness by the decision maker that a decision is needed, he must then design the decision situation to be processed. The decision maker accomplishes this by:

   a. Stating the decision situation in question form.
   
   b. Specifying authority and responsibility for making decisions.
   
   c. Formulating decision alternatives.
   
   d. Specifying criteria for assessing alternatives.
   
   e. Determining decision rules for use in selecting an alternative.
   
   f. Estimating the timing of the decision.  

3. **Choice.** The actual selection of a decision alternative is the main focus of any decision process. The four steps in the process of choosing include:

   a. Obtaining information for each decision alternative.
   
   b. Applying decision rules to the available criterion evidence to determine the decision alternative.
   
   c. Reflecting on the validity of the indicated choice and/or the criteria and decision rules to be employed.
   
   d. Confirming the indicated choice, rejecting it, or recycling.  

4. **Action.** Acting upon the chosen alternative is the final stage in the decision-making process. It involves four steps:

   a. Fixing the responsibility for implementation of the chosen alternative.
   
   b. Operationalizing the selected alternative by specifying procedures, facilities, staff, budget, etc.
   
   c. Reflecting on the efficacy of the operationalized alternative to ascertain whether it will do the job intended.

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61Ibid., p. 83.

d. Executing the operationalized alternative or recycling.

The Phi Delta Kappa Study Commission members note that evaluation plays a significant role in each stage of the decision process by providing appropriate and timely information, whether in a micro- or macro-decision level.

Decision Settings

According to the Phi Delta Kappa authors,

A decision setting is the total set of environmental circumstances governing both analysis and choice. These include the degree of change which might result from a choice, the urgency required, the ways alternatives and/or criteria are generated, the predictability of consequences for different decision options, the costs and risks associated with various decision options, community attitudes about possible changes and ways of accomplishing time, . . .

The work of Braybrooke and Lindblom, A Strategy of Decision, provided the means for conceptualizing the four basic decision making settings conceptualized by the Phi Delta Kappa authors as follows:

1. Metamorphic Decision Settings. Within this setting a complete utopian activity is aspired to by attempting to produce a complete change in an educational system. The authors state:

   Its guiding basis is an overarching theory which is necessary and sufficient to every detail of the proposed change and is completely understood in all its ramifications by the decision-maker. The decision-maker, moreover, must be capable of considering all relevant variables and collecting, analyzing, and synthesizing performance data about them as the change is being managed.

2. Homeostatic Decision Settings. Homeostatic decision making aims at restoring a normal balance in an educational system which is

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63 Ibid., p. 92.
64 Ibid., p. 94.
66 Ibid., p. 105.
3. **Incremental Decision Settings.** The focus of incremental decision making is on developmental activity for the purpose of continually improving a program. Such activity is generally supported by expert opinion, monitoring in a structured manner the present program, and recommending changes. The authors comment:

> Many so-called educational innovations are of the incremental type; they are attempts to make improvements in the present program without risking a major failure. Though there is little information to support them, the adjustments are sufficiently small that corrections can be made as problems are detected.°

4. **Neomobilistic Decision Settings.** The Phi Delta Kappa authors state:

> Neomobilistic decision-making denotes innovative activity for inventing, testing, and diffusing new solutions to significant problems. Such change is supported by little theory or extant knowledge; nevertheless, the change is large, often because of great opportunities such as those produced by advancements in technology outside of education, or because of critical conditions such as riots in inner cities.°

In essence, a neomobilistic decision requires making a large-scale change on the basis of a low degree of available information. A new theory of evaluation which would service decision making would have great utility in this setting.

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67 **Ibid.,** p. 106.


69 **Ibid.,** pp. 107-108.
The planned change model in education proposed by Clark and Guba and extended by Stufflebeam\textsuperscript{72} has been conceptualized to serve the purpose of large change, involving several steps over a long time span. The Phi Delta Kappa authors note:

Since efforts to bring about large change are usually accompanied by a low level of information grasp needed to effect them, decision models servicing such neomobilistic settings must necessarily project a rather voluminous set of steps to bring about the desired large change if there is to be any prospect of success.\textsuperscript{73}

The planned change model utilized the sequential activities of research, development, diffusion, and adoption when applied in an attempt to bring about neomobilistic change.

Types of Decisions

The fourth stage in relating evaluation to decision making focuses types of decisions. The four general categories for classifying decision questions which follow are based on two basic dimensions: that decisions can be classified as (1) a function of whether they pertain to ends or means and (2) on the basis of relevance of the decision to intentions or actualities. The authors state that "All educational decisions may thus be exhaustively and unambiguously classified by (1) intended ends (goals), (2) intended means (procedural designs), (3) actual means (procedures in use), or (4) actual ends (attainments)."\textsuperscript{74}

1. Planning Decisions. According to Stufflebeam, et. al.:

Planning decisions specify major changes that are needed in a program. The need for planning decisions arises from (1) awareness of a lack of agreement between what the program is intended to be

\textsuperscript{72}Ibid., p. 113.
\textsuperscript{73}Ibid., p. 112.
\textsuperscript{74}Ibid., p. 126.
Decision Models

Decision models are used by the decision maker and apply to the four decision settings described. Since metamorphic decision settings have only theoretical relevance, they are not included in the following content review of decision models.

1. **Synoptic Ideal Model.** Braybrooke and Lindblom's synoptic ideals decision-making model is explained by the authors in terms of definition and application. Synoptic refers to a high degree of comprehension by decision makers of all possible consequences directly related to all alternatives being considered prior to making a choice or final decision. It is termed ideal because it is almost never possible to meet all the conditions of comprehensiveness. In a decision setting (homeostatic) where changes to be effected are small and restorative, and the decision maker possesses and understands much information regarding how the change can be achieved, the model has some utility.

2. **Disjointed Incremental Model.** This model, according to Stufflebeam, et. al., assumes that the decision maker wishes to bring about small change slightly different from the status quo. He is continuously attempting to improve his means for dealing with present situations, focusing on current needs and problems and less on future goals. The model is of a developmental nature, since the decision maker has little information (expert judgment and structured inquiry) to base a decision involving a small change.

3. **Planned Change Model.** The two models briefly discussed so far apply to desired small changes on the part of the decision maker.

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and what it actually is, or (2) awareness of a lack of agreement between what the program could become and what it is likely to become.  

Planning questions include changing program goals, continuing or changing a general educational focus by a particular system, and arranging priorities in terms of needs that a program serves and expected behaviors of those completing a program.

The authority for making planning decisions generally resides with policy groups including such role functionaries as school boards, superintendents, principals, teachers, etc. External and internal forces will effect planning decisions made by those in authority positions.

2. Structuring Decisions. In theory:

Structuring decisions specify the means to achieve the ends established as a result of planning decisions, and must consider such variables as method, content, ... personnel, ... budget. Awareness of (1) planning decisions which specify what the program is to achieve, (2) the existence of alternative means available to achieve the specified outcomes, and (3) the relative strengths and weaknesses of the available procedural alternatives are the three sources for structuring an action plan to achieve the desired objectives.

Most structuring decisions are made by operation managers (e.g., school principals) rather than policy administrators, according to the Phi Delta Kappa authors. The policy administrator then confirms that the structuring decisions of subordinates is consistent with the established policy structure. Activities included as consequences of structuring decisions include budget allocation, staff orientation and recruitment, facilities and materials obtained and prepared, etc.

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75 Ibid., p. 126.

76 Ibid., p. 129.
3. **Implementing Decisions.** Specifically:

Implementing decisions are those involved in carrying through the action plan. These arise from two sources: (1) knowledge of the procedural specifications, and (2) continuing knowledge of the relationship between procedural specifications and the actual procedures. These two kinds of information aid in process control.  

Authority for making implementing decisions resides in operation managers (principals). Individuals with delegated authority (teachers) as part of their roles also make implementing decisions.

4. **Recycling Decisions.** The authors state:

Recycling decisions are used in determining the relationship of attainments to objectives and in determining whether to continue, terminate, evolve, or drastically modify the activity. The essential type of awareness precipitating these decisions is knowledge of the nature and timing of specified attainments.

Authority for recycling decisions is with the operations manager during implementation and the responsible policymaking group at the end of an activity. It should not be assumed that recycling decisions are made only at the end of an activity's cycle; rather, they occur throughout an activity as quality or product control devices.

**CIPP Model of Evaluation**

A new theory of evaluation designed to service the decision-making process finds its conceptual base for development in the chart relating evaluation to decision making in Figure 2 and in the brief descriptions of the terminology which preceded this section of the literature review. Chapter VII, "Evaluation Types and a Model for Evaluation," of the book, *Educational Evaluation and Decision Making*, focuses on the four types of evaluation which interrelate with those


decision-making concepts previously presented. The four types of evaluation are Context, Input, Process, and Product (CIPP) which form an evaluation model and are based on the eight premises that,

1. The purpose of evaluation is to provide information for decision-making, therefore it is necessary to know the decisions to be served.

2. The evaluator must be oriented to decisions to be served and function within this setting in order for evaluation to be relevant to decision making.

3. A valid evaluation model must be grounded in sound conceptualizations of the change settings (homeostatic, incremental, and neomobilistic) and models (synoptic, disjointed incremental, and planned change) to be served.

4. Different types of decision questions (planning, structuring, implementing, and recycling) require different types of evaluation designs.

5. While different evaluation designs vary in content, a single set of generalizable steps (delineating, obtaining, and providing) can be followed.

6. In order to answer questions posed by decision makers, designs for evaluation studies should satisfy criteria both of scientific adequacy (internal and external validity, reliability, and objectivity) and of practical utility (relevance, importance, scope, credibility, pervasiveness, timeliness, and efficiency).

7. Decision making is comprised of four stages (awareness, design, choice, and execution) that potentially require evaluative information.

8. Since decision-making requirements are subject to change, evaluation designs should be flexible and capable of meeting changing requirements.

The four types of evaluation, along with the actions of delineating, obtaining, and providing that take place sequentially and logically within each type of evaluation, have been operationally defined in Chapter I of the study. Further elaboration and significance of the

79Ibid., pp. 326-328.
four types of evaluation for serving decision making will be highlighted in the study where it is applicable to the development of the instructional content of the simulation.
CHAPTER III

DESIGN AND DEVELOPMENT PROCEDURES

The purpose of this chapter is to describe the design and development procedures followed in creating the simulation that was field tested in this study. The simulation was developed in The Ohio State University Evaluation Center with support from Phi Delta Kappa. Operational constraints identified in the study's proposal and present during the project included:

1. Budget limitation (less than $5,000)
2. Small core staff (director and assistant)
3. Short time schedule (ten-month duration)

Information gathered and operational decisions made during the project were predicated on the items listed.

The chapter is organized around five general types of decisions and information used as guidelines during development operations. The guidelines included preplanning, planning, structuring, implementation, and recycling decisions. Preplanning guidelines refer to decisions for initially operationalizing a simulation project. The other four types of decisions are explained in the Phi Delta Kappa book and in Chapter II, Review of the Related Literature. Events and activities which took place during monthly and bi-monthly time periods are described in this chapter.
Preplanning Information and Decisions  
(September, 1969)

General Project Information

During September, 1969, certain baseline decisions had been made by the seven members of the Phi Delta Kappa Research Commission on Evaluation and/or the Symposium director, Daniel L. Stufflebeam. These included:

1. A focusing objective. One of the Symposium's objectives was "The development and testing of a simulation game based upon the Phi Delta Kappa's Study Commission's proposed approach to evaluation and applied to problems of curriculum development in language development." The Commission intended that the school district setting for the simulation be an urban area.

2. Operating budget. An operating budget, based on funds allocated by Phi Delta Kappa for the simulation's development and testing, was approximately $3,000.

3. Project's termination date. The simulation was to be field tested as an integral part of the Phi Delta Kappa Research Symposium to be held on June 22-24, 1970, at The Ohio State University.

4. Project director. Robert L. Hammond, Co-Director at the Evaluation Center at Ohio State and a member of the Study Commission, was to serve as director of the simulation's development. The project was to be in conjunction with his duties as an associate professor in the College of Education.

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80 Phi Delta Kappa Study Commission on Evaluation, "Objectives for the 11th Phi Delta Kappa Symposium."
5. **Staffing.** A half time graduate research associate, funded by the College of Education, was to be selected to assist the simulation director. The writer was invited to participate in the simulation's development as a one-half time graduate research associate and began on October 6.

6. **Graduate seminar.** A seminar taught by the simulation director and focused on utilizing evaluation theory was to be offered interested University graduate students during the Spring Quarter of the 1969-1970 academic year (April-June). Additional consultants were also to be utilized as needed in varying developmental stages of the project.

**Planning Information and Decisions**  
(October-November, 1969)

**Planning and Orientation Information**

The second and third months were focused directly on orientation of the staff to the project and to their role of acquiring useful information for planning decisions. The orientation included participation in an evaluation theory course; a review of relevant literature in evaluation theory and simulation design, development, and uses; an interview on simulation activities of the University Council of Educational Administration; and participation in a simulation workshop. The information gathered from the four experiences served two major decisions: (1) what elements of evaluation theory to teach and (2) how those elements might best be taught through the use of simulation. Operationally, the following activities served to build an information bank for planning decisions:
1. **Evaluation theory course.** Education 965, *Functions and Methodology of Evaluation*, a graduate course offered by the Evaluation Center staff, considered alternative models of evaluation with concentration on the CIPP Evaluation Model, including exposure to a simulation developed by Worthen and Hock. The course also provided a recruitment opportunity for creating an interest in certain students who chose to pursue their interest and to enroll in the evaluation-simulation seminar offered in the spring. The spring seminar was designed to function as an extended staff involved in creating the simulation.

2. **Review of relevant literature.** The review of relevant literature was categorized into three general parts: (a) simulation as a media of instruction, (b) problems and issues confronting the administrators of urban public school districts, and (c) evaluation theory.

   Initial scanning of The Ohio State University libraries provided a bibliographic list of simulation references available on campus in educational and noneducational fields. A listing of the references is presented in Appendix A.

   During this period, work on a bibliographic set of references relating to current issues being confronted by school personnel in urban school districts was initiated that formed the basis of the simulation's setting. A complete

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listing of the references used in framing the setting of the simulation in the study is presented in Appendix B. The literature survey was expanded through staff participation in education and sociology courses such as: Problems in Curriculum and Instruction in Inner-City Schools, Administrative Problems of the City School System, The History of Negro Education in America, Staff Personnel Administration, Practicum in Educational Administration, The School and Community, and Sociological Methods of Community Analysis. The staff was aided in focusing content materials through discussion with course instructors and student colleagues.

3. Interview. On November 10, a thirty-minute interview was conducted with Donald P. Anderson, Associate Dean of the College of Education (see Appendix C). The interview focused on his previous involvement as a staff member with the simulated materials developed by the University Council of Educational Administration (UCEA). The interview began with a brief historical description of the UCEA materials. The Dean commented: "The original Jefferson Township Simulation Materials were produced in a study initiated in 1957 and originally called 'The Determination of the Criteria of Success in Educational Administration.'" A report of this study can be found in a reference by Hemphill, et al. Data were collected on an actual school district and a school system called Jefferson Township. The Dean stated, "In the

project, 232 elementary principals from various sections of the United States played the role of principal of the simulated Whitman Elementary School within Jefferson Township. Principals were asked to make decisions about problems with which they were confronted."

The materials have since been updated and referred to as the Madison Project. A final report submitted to the United States Office of Education Bureau of Research in December, 1967, by Jack A. Culbertson, Executive Director of the University Council for Educational Administration, was available at the time of the interview. Specific questions and responses used in the interview are found in Appendix C.

In summary, the highlights of the interview relating to UCEA's work in simulation indicated: (a) individual roles for a specific administrative position have been created; (b) team problems requiring interaction between various roles are available; (c) communication within simulations takes place through in-basket items, tape recorded problems, and filmstrips with tapes; (3) resource documents are available for each role developed; and (e) simulations lack built-in-feedback to participants. The interview, although brief, was valuable as an information source in terms of noting an organization (UCEA) on campus with experience in developing simulated materials and identifying early with an individual who had personal experience in this area of development.

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Instructional simulation clinic. Another significant informational gathering opportunity occurred on November 19. The Association for Student Teaching sponsored an "Instructional Simulation Clinic" at The Ohio State University under the direction of Donald R. Cruickshank. Presenters at the three-day clinic included Paul A. Twelker, Bert Y. Kersh, Frank W. Broadbent, and Cruickshank, all acknowledged authorities in the field of educational simulation development and application. Particular elements of the clinic related to the study included in Cruickshank's presentation of the Inner-City Simulation Laboratory, Twelker's overview comments on Selected Applications of Simulation in Professional Education, and random comments by clinic participants in attendance.

Cruickshank's materials package focused on problem simulations that a beginning teacher in an inner-city elementary school might expect to encounter. In planning for simulated content related to inner-city or urban settings, Cruickshank suggested special emphasis be placed on demographic data collected and classified according to types of neighborhoods. For purposes of realism, neighborhoods considered in the development of the SRA materials included: lower socioeconomic (ghetto or slum); lower socioeconomic (not slum); middle socioeconomic; and upper socioeconomic. According to Cruickshank, content bearing questions focused on the inner city and related to expectant instructional

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outcomes in participants are:

a. What groups are involved in the inner-city setting?

b. What cultural factors in the school or outside it are most pertinent?

c. What cultural values bear significantly on the problem?

d. What are key roles and positions not performed adequately?

e. What channels of communication are open and at what points are there blocks or breakdowns?

f. What changes can be instituted that will be responsive to that problem?

In order to introduce or orient the new teacher (participant) to his or her school and school system, two filmstrips and a long-playing record were used during Cruickshank's presentation. In essence, the presentation included:

a. "Orientation to Edison School"—Principal (slide) speaking (on tape) to Pat Taylor (new teacher)

b. "Orientation to the Urban Schools"—City-wide meeting for all teachers in simulated school district with speakers (on tape) from:

(1) Bureau of Teacher Personnel (slide)
(2) Assistant to Superintendent (slide)
(3) Urban Teachers' Union President (slide)

Clinic participants reacting to Cruickshank's presentation including audio-video media had these general comments to make about the materials.

a. Since simulation participants may not be accustomed to dealing with low socioeconomic value systems, time should be built into the simulation for group discussion of these values before becoming involved in the simulation.
b. A sheet of information relating to what was said in the audiovisuals should be made available for future reference by participants when responding to a simulated situation.

c. If participants are to play the role of teachers, then more dialogue from other teachers should be portrayed in the simulated setting.

d. The simulation needed a "wild card personality" who just happens by during a situation for reasons of cueing the participant. This would be particularly important if the simulation director expects certain behavioral outcomes of participants.

Twelker in his presentation relating the research on simulations suggested that (a) developers have been overly concerned with simulative reality, (b) rare events within a simulated setting should be developed and available to participants, (c) overprompting of participants should be avoided, and (c) still pictures (slides) are better than moving. Clarification of these points was later uncovered in literature edited or written by Twelker.

The clinic information, the interview, staff class participation, and a general review of literature in the three areas of evaluation and decision making, simulation design, development and use, and general issues and problems facing school personnel in urban settings provided input for a key staff decision-making meeting in December. Outcomes of the planning meeting led to the following operational objectives:
a. To focus the simulation's theoretical content on the CIPP Model of Evaluation including:

(1) Four evaluation types: Context, Input, Process, and Product
(2) Three evaluation processes: delineating, obtaining, and providing

b. To focus the simulation's gaming strategies on:

(1) In-basket/out-basket techniques
(2) Slide-tape presentations

c. To focus the simulation's setting on:

(1) Internal needs, problems, and opportunities facing urban school districts (staff relationships)
(2) External needs, problems, and opportunities facing urban school districts (community relationships)

Structuring Information and Decisions
(December, 1969)

Structuring Decisions by Consensus

On December 16, 1969, a formal decision-making meeting was held by the staff to make structuring decisions based on information gathered over the prior two-month period. Specific developmental areas in which decisions were made included: (1) specifying of a theoretical structure on which to build the simulation; (2) testing the structure selected on a curriculum problem; (3) developing a setting in which a problem-solving situation could occur; and (4) developing strategies (gaming mechanics) for providing information to participants during the simulation for completion of assigned tasks.

1. Specifying a theoretical structure. On page 24 in Chapter II, a figure entitled "A Chart for Relating Evaluation to Decision Making" was presented. It was decided by the developers to use the chart as the theoretical framework for focusing the instructional content of the simulation. A decision
concerning which cells in the chart would be selected in terms of "best orienting" participants to the theory was left for a later date, when the Symposium director would be present and could be involved.

2. Testing the structure. During the "Instructional Simulation Clinic," Frank W. Broadbent suggested that if a model was not built prior to attempting to simulate a system, chances of the simulation serving as a creditable instructional technique were extremely poor. Expanding on this idea, the project director pointed out that a model relating evaluation and decision-making theory to a mathematical classroom problem structure was available. The sixteen-step model illustrated in the Phi Delta Kappa book could be adapted to the curriculum problem (reading) which was to be the focus of the simulation. However, deciding which of the sixteen steps would be simulated precluded any further efforts of the simulation development.

3. Developing a setting. The problem of developing a simulated setting was predicated on the overarching concern of the developers to create a simulated urban public school district experience closely aligned to participants own backgrounds and perceptions. Of particular importance were the issues of roles that would reflect the needs, problems, and opportunities of school personnel, community groups, and individuals of the urban school district. To begin delineating

roles that might add a dimension of urban reality to the simulated setting, the following list of personnel for which research data were readily available was presented:

a. School personnel

(1) Evaluator
(2) Superintendent of Inner-City Schools
(3) Director of Curriculum
(4) Elementary School Principal
(5) Elementary Teachers (grades 1-6)
(6) President of Teachers' Organization
(7) Ombudsman
(8) Community Representative—The School Parent Adviser for the Neighborhood (SPAN)
(9) Staff Consultant to Model Cities
(10) Substitute Teacher
(11) Representative of a State Education Department

b. Community personnel

(1) Chairman of Educational Task Force (Model Cities)
(2) Chairman of The Ad Hoc Committee of Parents for Quality Education
(3) Chairman of The Save Our Children Committee (SOC)
(4) Chairman of an Urban Education Coalition (business and religious linkage)
(5) Chairman of the Educational Issues Coordinating Committee (Mexican-American)
(6) Chairman of Woodlawn Community Board (university linkage)
(7) Representative of the National Association for the Advancement of Colored People (NAACP)
(8) Pastor of Pilgrim Baptist Church
(9) Chairman of Citizens' Concern for Rising Taxes

The list of school and community concerns or issues that could be reflected within the setting included:

a. School view on issues

(1) Achievement scores in reading low
(2) Experienced teachers desiring transfers
(3) Teacher negotiations going on

(a) AFT representing teachers
(b) Increase in starting salary
(c) Smaller class size
(d) Security personnel placed in schools
(e) Teacher aides desired
b. Mobility of students high
(5) Finances for "new" reading books and materials
(6) Achievement scores in math lower than reading
(7) "Relevant texts" (problem with state textbook adoption in committee)
(8) Inadequate library facility (no reading materials in majority of homes)

b. Community view on issues
(1) Inner-city parents keeping children home (boycott)—unsafe condition of school building
(2) Inner-city parents displeased with no foreign language being offered
(3) Safety guards at busy crossings
(4) NAACP taking court action to tie up federal funds (desegregation issue)
(5) Lack of nourishment (before lunch) for majority of students
(6) No black staff members on elementary curriculum committee
(7) Lack of understanding between school administration and educational task force leader (Model Cities)
(8) Schools to be available (free) to "any" community group wishing to use them
(9) University wishes to use schools for experimental research programs
(10) Tax bond defeat (unable to raise the minimum millage for supplemental state foundation support)
(11) Business moving to suburbs (lessening taxable property)
(12) Achievement tests designed for middle-class whites
(13) Average level of adult education
(14) Trade unions prohibiting blacks into apprentice programs (examine qualifying exams)
(15) Jobs for unskilled adults (part-time and seasonal)

On the criteria issue of selecting among alternatives, the following decisions were made:

a. Those roles for which the most information was available would be given first priority for inclusion.

b. Issues (needs, problems, and opportunities) would be confronted through the dialogue of the simulated characters.

c. The urban school district setting would be created by the staff. (Under ideal conditions, ample budget, staff,
and time, an entire urban school district could have been identified and researched and findings incorporated into materials forming the setting of the simulation. However, given the constraints of the simulation project, the best alternative for designing the setting was not possible.

4. Selecting strategies for providing information. The strategies selected for maintaining continuous involvement of participants in the simulation experience included building (a) office memos establishing the need for specific kinds of information, (b) data files relevant to needs for information, (c) a model response (feedback) for each participant task, and (d) a progress report on activities occurring between the tasks.

Other related decisions were that:

a. Memos, file data, and progress reports could not be written until decisions were made on what elements of evaluation theory and simulated setting to include.

b. Developmental production work would rely heavily on the talents of outside consultants and students in the evaluation-simulation seminar to be offered in the spring.

Structuring Information and Decisions
(January, 1970)

Theoretical Content Decisions

During the second week of January, a major project decision meeting was held between the Symposium director and the simulation developers to reach consensus on the elements of the CIPP Model of Evaluation to be
simulated. Figure 2 in Chapter II was the initial focal point of the meeting and subsequent discussion. The cells in the chart explicate the role of the evaluator and decision maker. Individual cells were discussed as possible foci of the simulation. Priorities, in terms of blocks of cells that gave a representative cross section of the CIPP Model, were considered. An initial decision was made to focus the simulation within a neomobilistic setting.

In order to expand the chart in terms of the chosen setting, and in particular, to CIPP concepts, a second decision was made. It was to invite Stufflebeam, the originator of the CIPP Model, to state his conceptions of the evaluator and decision-maker roles within each of a possible eighty-eight cells in a theoretical planned change model.

Participant Objectives

Near the end of January a memorandum was released by the simulation director indicating the behavioral objectives expected to be manifested by participants. The memorandum stated: "Having participated in the simulation game developed for the PDK Symposium, the participants will:

"1. Demonstrate a comprehension of the four strategies for evaluation and the relationship to decision settings, types, roles, and process, as demonstrated by the completion of the game.

"2. Demonstrate an acceptance (3.0 valuing--acceptance of a value) of the concepts developed for evaluation and decision makers through a desire to participate in the further development and implementation of concepts developed in the monograph, as demonstrated by the results of an
instrument designed to measure the affective behavior of the participants."

During the initial planning stages, an outside evaluator was commissioned to conduct an evaluation of the Symposium. A section of his final evaluation report was to focus on the simulation. The developers understood the outside evaluator would gather data relative to the two stated objectives.

Selection of Participants.

Criteria for selecting Symposium participants was part of a final plan for the Symposium submitted by the Symposium director to the Phi Delta Kappa Director of Research Services. The planning committee established the criteria for inviting participants. They included:

1. Participants should be employed in one of five types of institutions: (a) elementary and secondary school agencies, (b) research and development agencies, (c) state education departments, (d) university colleges of education, and (e) national education agencies.

2. For an institution to be represented, both a decision maker (administrator) and evaluator must agree to attend.

3. The institution being represented should either have or be planning to develop an evaluation unit.

4. It is desirable though not mandatory that the top administrator and the top evaluator be the persons who attend from an institution.

A two-pronged concern of the developers at this stage was (1) maximum size and (2) backgrounds and skills of the group selected to attend the Symposium and ultimately participate in the simulation.
The developers had little information about the optimal size of a group of participants. It was assumed that each individual should be able to profit by having the opportunity to actively participate in the simulation experience. A factor limiting group size was the facility in which the simulation would take place. Michael Inbar on the subject of group size indicated:

In overcrowded groups the players learn the rules of the games less efficiently, interact less, are less interested in the session and participate less actively in it; as a consequence they tend to play a lesser number of moves and the impact of the game is weaker.\(^{86}\)

Cruickshank states:

The question of size seems to be related to features and purposes of the simulation. Depending upon the objectives sought, the group can vary in size up to a critical point. For each simulation the critical point can be a function of space, instructor skill, group characteristics, time, or other. Therefore, it probably would be difficult to predict an optimum number of participants without attention to these variables.\(^{87}\)

Although Cruickshank's statement to limit Symposium group size was not available to the developers at the time a decision was made, the impact was inherent in the decision. For purposes of structuring the Symposium the number of individuals selected was restricted to sixty persons, excluding staff and invited presenters who also had an opportunity to take part in the simulation if they desired.

The second concern of the developers focused on how best to utilize the background experiences and special skills of participants. A decision was made to divide the simulation participants heterogeneously into small groups, approximately six individuals per group. The criteria


\(^{87}\)Cruickshank and Broadbent, Simulation in Preparing School Personnel, p. 23.
for assignment focused on current agency position (administrator, evaluator, and methodologist). The final grouping of participants, although undetermined until early June, is presented in Appendix D.

Implementation Information and Decisions
(February-March, 1970)

This two-month period was a continuation of structuring decisions and the beginning of implementation decisions effecting the development of simulation products. Specifically, three developmental areas of the simulation began to take shape in the form of written documents, scripts, and working outlines. The areas included (1) creating a simulated role for participants, (2) producing the simulated setting, and (3) sequencing simulated activities (tasks).

Creating Participant's Role

Once steps had been taken to identify and select Symposium participants, developers turned attention toward the role they would play. It was important for participants to enter the simulation experience with a grasp of the fundamentals of the theory of educational evaluation and decision making. Without such knowledge, participants would conceivably have difficulty applying the theory to simulated problem-solving situations. To enhance the probability of having participants at a basic knowledge level, a 532-page prepublication manuscript of the Phi Delta Kappa book was to be mailed each participant three weeks before the Symposium was scheduled. Participants were asked to develop as thorough an understanding as possible by studying Chapters 1, 2, 3, and 7. Other chapters were designated for study by participants, depending on an individual's interest (administrative, evaluative, methodological). Based on the assumption the books would be delivered on schedule and
participants would study the designated chapters, a decision was made on the participant's role. Functioning in small groups, each participant was to play the role of an evaluator in the simulation.

To help participants identify more closely with their assigned role, written materials were prepared for aiding the transferring from a "reality role" to a "simulated role" (see Appendix E). The written materials included (1) a letter of invitation to become the assistant superintendent of evaluation in the school district, (2) a job description, and (3) a brief personal description of simulated characters used in creating the setting.

Producing the Setting

A script for the purpose of introducing the evaluators to their simulated school district was written. It included value positions of school personnel and community members in addressing unsolved problems, unmet needs, and potential opportunities relating to general school district issues. Specifically, statements and references made by the characters were to reflect a need for planned change in the curriculum area of reading.

Upon completion of the first draft of the script, it was submitted to the simulation and Symposium directors for initial responses. Additional critiques of the script were made by Roger C. Farr, Associate Professor of Education, Indiana University, and Lonnie Wagstaff, Assistant Professor of Educational Administration, The Ohio State University. Taking into account their recommendations made, the script was finalized and prepared for taping.

Sequencing Simulation Activities (Tasks)

The third major implementation decision was the development of a
series of five tasks which the simulation participants, as evaluators, would perform. Tasks one through five involved the following activities:

1. **Task 1 (Context Evaluation).** The participants as a group will develop an evaluation design that spells out how they are going to uncover the basic causes of the reading problem. The task is one involving the development of a strategy for delineating information.

2. **Task 2 (Input Evaluation).** The participants as a group will develop a plan for assessing the alternative improvement strategies identified for providing a solution to the problem in reading instruction. The task is one involving the development of a method for obtaining information.

3. **Task 3 (Process Evaluation).** The participants as a group will identify potential barriers and ways of assessing those barriers. The task is one of delineating information.

4. **Task 4 (Product Evaluation).** The participants as a group will prepare an up-to-date evaluation report to be presented to the superintendent following a nine-month program cycle. It will indicate the kinds of testing, data, analysis, etc., used by the evaluator to gather information over the time span. The task is specifically one of delineating and providing information for a report that focuses on methods of monitoring attainments in order to identify discrepancies between performance and objectives of the selected improvement strategy.

5. **Task 5 (Product Evaluation).** The participants as a group will develop a presentation for the June Board of Education meeting (follows report to superintendent) that will indicate
clearly and simply that substantial progress has been made toward the initial objective of improving student reading performance. The task is one of providing information relative to the outcome of objectives established for students and teachers in attempting to improve student reading performance.

Tasks 4 and 5 although similar in focus were designed to stimulate participants' thought processes in terms of levels of information the evaluator must provide to diverse audiences.

Near the end of March the development of a participant's role, simulated setting, and sequenced activities (tasks) were finished. The following two-month period was spent in developing documents (memos, progress reports, file data, etc.), audiovisuals, and assessment instruments for use at the June 22-23 field test.

**Implementation and Recycling**
**Information and Decisions**
(April-May, 1970)

The pressure of finishing products designed for use in the simulation was apparent during the two-month time interval. Assignments and deadlines were specifically defined by the simulation director. The assignments included:

1. **Simulation-evaluation seminar**. Prepare memos and progress reports. Train members of the class to serve as secretaries to small participant groups.

2. **Director and consultants**. Prepare file data, focused on elementary reading information, available for participant use in preparing group responses.

3. **Assistant director**. Prepare script used in developing the
setting for taping, as well as making necessary arrangements for acquiring slides to supplement the audio presentation.

4. **Mini-field test.** Arrange to field test the simulation near the end of May, utilizing the Education 965 class as an audience. An assessment of the presentation for purpose of recycling prior to Symposium field test was completed.

5. **Assessment instruments.** Establish criteria for building instruments to assess simulation for purpose of future developmental recycling activities.

An unanticipated barrier developed when The Ohio State University campus was closed for twelve days during May as a result of student disturbances. The closure and the restless aftermath which prevailed in students and staff added a unique barrier to efforts focused at meeting deadlines and completing various stages of the simulation.

1. **Simulation-evaluation seminar.** A seminar was offered Spring Quarter by the Educational Development Faculty for graduate students interested in developing materials for use in the Phi Delta Kappa Simulation Project. A prerequisite, established by Hammond (seminar instructor) for enrollment in the course, focused on academic and/or practical experience in evaluation. The two criteria operationally defined were:
   a. Education 965 credit and/or
   b. Participation in an agency doing evaluation.

Four students met the minimum criteria of the course and enrolled. Of the four all had received credit in Education 965, two were employed by the Planning, Research, and Evaluation Department (Columbus Public Schools), a third had been a context evaluator with the Southwest Regional Laboratory
(Research and Development Center), and a fourth had practical experience as an elementary principal (Dayton Public Schools).

Following a brief orientation to the simulation project including a progress report on developmental activities, bibliographic references related to simulation, a copy of the introductory script (setting), and a time schedule of projected due dates in terms of simulation development, the class was asked to take part as a team of staff developers. Specifically, their roles included producing:

a. **Memos** for the purpose of

   (1) Aiding communication within the simulation
   (2) Defining the task which the participants were to perform
   (3) Summarizing events leading up to a task request by the decision maker
   (4) Creating a value-oriented document expressing decision maker's feelings
   (5) Aiding participants in identifying each task's relationship to a specific aspect of the CIPP Model of Evaluation

b. **File data** for the purpose of

   (1) Providing content materials upon which participants could base "small group" decisions
   (2) Providing objective data for displaying reading performance scores and teacher methodology utilized in simulated school system
   (3) Establishing a historical data base for participant decision making
   (4) Establishing reference materials for indicating student reading skills performance levels past and present

c. **Progress reports** for the purpose of

   (1) Providing participants with a sequential outline of events and decisions which occurred between assigned tasks
   (2) Illustrating examples of delineating, obtaining, and providing operations which occurred between assigned tasks in each type of evaluation
d. Secretary's role for the purpose of
   (1) Adding a live characterization to maintain the ongoing nature of the game
   (2) Assisting "small groups" by giving helpful advice upon request
   (3) Locating and interpreting materials on file when requested by participants

The class input into the simulation project in terms of quality of written products and conceptual insights was a major factor in the project's developmental process.

2. Director and consultants. Aside from duties related to the simulation seminar, the director also constructed documents for the simulated files. His background in curriculum and methodology permitted him to conceptualize necessary elements which would need to be contained in an informational file focused on an elementary reading problem. In order to extend his abilities, a reading consultant from Indiana University was invited to participate for three days in the project. A list of documents completed included:
   a. Reading program descriptions focused on
      (1) Organization
      (2) Content
      (3) Facilities
      (4) Students
      (5) Teachers
      (6) Community
   b. Reading program objectives
   c. Summary and Comparison of Median Reading Achievement Subtest Grade Equivalent Scores
   d. Summary and Comparison of Median Subtest and Total Reading Skills Test Scores
   e. Summary and Comparison of Median Verbal and Nonverbal I.Q.
f. Summary and Comparison of Median Total Teacher Scores and Item Scores on The Checklist of Teacher Practices in Reading Instruction

As the consultant and other individuals became associated with the project, a brief orientation was held to clarify an individual's or group's task in terms of contributing to the simulation's development. In the process of orientation, differing concerns or critiques were verbalized which required consideration and/or action in future developmental stages. Thus, the simulation developers had the opportunity to recycle the development of the simulation prior to a field test. One example of a recycling decision made in this manner was the inclusion of a supplementary exercise to the five designed tasks.

A student employed by the Columbus Public Schools, Planning, Research, and Evaluation Department pointed out the linear manner in which tasks one through five flowed. In their department, several projects were in varying stages of development thus causing varying nonlinear demands on an individual's time. On the basis of this critique, a supplementary exercise was created. One of the purposes of the exercise was to add a realistic dimension to the project work of the evaluator participating in the simulation.

From the example, it can be seen that the critiques of consultants and others contributed more to the project than just the specific purpose of their defined role in the simulation's development.
3. **Assistant director.** The assigned task of the assistant director was (a) arranging and preparing the introductory script for taping and (b) designing and producing a series of slides to complement the taped script.

a. **Taping the script.** A first step prior to taping required identification of individuals to speak the parts of characters in the script. A drama professor on the Humanities Education Faculty was contacted and he identified twelve possible individuals for consideration. The twelve, a mixture of students and faculty, were contacted with the idea that an audition would be held. The number was reduced to six undergraduates when only a ten dollar remuneration was offered for their services. At the time of the scheduled audition, the University was closed because of the campus disturbances. When it re-opened, only one student was interested in participating. The remaining seven voices were filled by graduate students in educational administration and development. Criteria for selection was based on availability and interest in the simulation effort.

Taping of the script took place in a three-hour recording session at a University recording studio. The cost of the recording studio included only the cost of the tapes. Additional tapes were also arranged for at the time of the session. A recutting of inaudible sections of the original tape was accomplished through splicing. One voice was completely erased and a substitute chosen following the initial session.
b. **Slide series.** Prior to taping the script, a professor, specializing in materials development on the Educational Faculty, was consulted for the purpose of giving direction on slide production. His contribution included:

1. Reading the script and recommending appropriate placement of slides
2. Suggesting that stick figures of characters be drawn prior to acquiring a photographer

Both of his recommendations were implemented.

The cast selected to pose for the photographer was the same group of individuals used in the taping of the script along with voluntary staff. Using a series of stick figures gesturing in ways to emphasize a particular point in the script, the various individuals mechanically responded to production directions during photographing. Photography settings used were the law auditorium and dean's office and conference room in the College of Education.

The photographer was hired through the University's Department of Photography and Cinema. The total cost included three hours of photographer time, sixty original slides, and three copies of each original.

In summary, the total cost of developing tapes and slides consisted of:

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<th>Item</th>
<th>Cost</th>
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<tr>
<td>Cast (8)</td>
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<td>Tapes (5)</td>
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<tr>
<td>Photography</td>
<td>130.55</td>
</tr>
<tr>
<td>Total cost</td>
<td>$220.70</td>
</tr>
</tbody>
</table>

4. **Mini-field test.** The last class session for a group of seventeen graduate students enrolled in Education 965 was
spent participating in the simulation. A Saturday morning (8:30-11:30) and afternoon (12:30-3:00) were chosen by the developers to present the simulation to the group for purposes of determining:

a. Degree of structure needed by participants to accomplish assigned tasks.

b. Extent of the secretary's role.

c. Participants' reactions on relationship between tasks and CIPP theory.

d. Participants' reactions on administrative concerns (group size, work space, and time allotted for task completion).

e. Adequacy of file materials in terms of completeness.

A doctoral candidate in evaluation served as evaluator for the mini-field test of the simulation. His report (located in Appendix F) covered tasks one and two and was limited to a four-hour session.

On the basis of the report the following modifications were made to the simulation prior to actual field testing:

a. Model responses were added by the developers to tasks 1, 4, 5, and supplemental exercise (explanations served as feedback to the participants).

b. Presenter took a more active role in updating participants on simulated between-task activities and decisions.

c. Time for completion of tasks was reconsidered.

d. Group assignments were limited to seven individuals.

The mini-field test was a profitable, although limited, experience for the developers. The experience provided
the opportunity for recycling decisions to be made prior to a presentation of the simulation in the actual field test setting.

5. Simulation assessment. Toward the end of May, scheduled time was allotted for determining methods for assessing the simulation at the Symposium field trial. The assessment data and analysis were to be used for recycling, modification, or continuation decisions. Initially, a general decision was made to focus assessment methodology in two areas: (a) individual-participant reactions to the simulation and (b) group products (written reports) which resulted from tasks assigned participants during the simulation.

a. Individual-participant reactions. Before constructing an instrument to assess individual-participant reactions to specific elements of the simulation, a set of guidelines were developed enumerating the concerns of the developers during the design and development process. The guidelines included:

(1) Allowing participants to become familiar with the theory of evaluation through a simulation game.
(2) Focusing the simulation experience on a common real-life educational setting for the purpose of involving participants in the game.
(3) Assuring the ongoing nature of the game by using a live characterization.
(4) Assuring the ongoing nature of the game by using printed information that is applicable to evaluation theory.
(5) Allowing adequate time to complete each assigned task.
(6) Allowing participants to design a report (simulated response) for all tasks and the supplemental exercise that utilizes specific components of evaluation theory as they relate to available simulated information.
(7) Providing a detailed general report after Tasks 1, 4, 5, and the supplemental exercise that would enable
the participants to self evaluate their own report.
(8) Challenging the knowledges and skills of the partici-
pants as evaluators in a short summation exercise.
(9) Assuring adequate participation and a diverse input
of administrative, evaluative, and methodological
knowledges and skills by assigning individuals to
groups.
(10) Providing adequate physical arrangements for the
simulation game to take place.

Using the ten guidelines as a framework, a simu-
lation opinionnaire was constructed to gather individual-
participant data. (A copy of the instrument is contained
in Appendix G). The Opinionnaire consisted of thirty-five
Likert-type statements, and a response mode with a range
of 1.00 to 5.00. Possible individual responses to each
statement were placed on a continuum from strongly disa-
gree (numerical rating of 1.00) to strongly agree (nume-ical rating of 5.00).

Upon completion of an initial draft of the instru-
ment, the writer submitted it to the simulation and Sym-
posium directors for their content validity approval.
Approval was predicated on:

1. Applicability of statements to developmental project
issues (general coverage).
2. Clarity in the wording of each statement (minimize
haphazard response).
3. Adequate cues for recalling specific circumstances
related to a given statement (minimize haphazard
response).
4. Avoidance of redundant statements (length of instru-
ment).
5. Clarity of response instructions and individual
identification (administrative issue).

The exact method of recording data from The Opin-
ionnaire for purposes of analysis was considered. A
frequency distribution mechanism was designed for each statement. Tabulated data were then to be treated in terms of median and/or mean scores. The formulae used included:

the mean \( (M_x) \)

\[
M_x = \frac{\sum x_i}{N}
\]

where \( \sum x_i \) = sum of scores  
\( N \) = number of scores

and the median \( (M_{dn}) \)

\[
M_{dn} = 1 + \left( \frac{\frac{N}{2} - F}{f_m} \right) i
\]

where  
\( l \) = exact lower limit of the class interval upon which the media lies  
\( \frac{N}{2} \) = one-half the total number of scores  
\( F \) = sum of scores on all intervals below \( l \)  
\( f_m \) = frequency (number of scores) within the interval upon which the median falls  
\( i \) = length of class interval

Final median scores were to be recorded in table form and displayed in graphic form in Chapter IV.

Another category of data collected from individuals focused on voluntary comments related to either the simulation experience and/or the simulation opinionnaire. Statements were recorded and are considered in Chapter IV.

b. Group products. Another technique for assessing the simulation was through written group products resulting from the tasks in the simulation. Reports were to be recorded.

on response forms provided for each group. A provision for feedback was also made for selected groups to present their reports to the entire ten groups after each task's completion. The selected reports were to be taped for future reference and analysis in Chapter IV. Methods for assessing group reports in terms of adhering to the theory of evaluation and simulation materials were not delineated at the time.

In summary, the planned data for assessment of the initial field test included individual participant responses to the Simulation Opinionnaire and group responses via written reports to tasks.

Implementation and Recycling
Information and Decisions
(June, 1970)

The month of the simulation field test was spent in completing last minute details. These included:

1. **Training secretaries.** It was necessary to acquire and train six additional individuals to play the role of secretary in the game. Criteria for selection was credit for Education 965 and availability for the two-day session.

2. **Presenter's introduction.** The presenter was to limit his opening comments to (a) the rules of the game and (b) his role related to maintaining the time schedule for the purpose of moving the simulation toward completion.

3. **Outside evaluator.** The outside evaluators were invited to interview staff and review the simulation materials. A team of evaluators from the University of Colorado assisted with
4. **Facility.** Tables were arranged and public address systems and audiovisual equipment were tested in the room where the field test was to take place. The potential problem of recording group reports was solved by acquiring a transportable hand microphone. Adequate ventilation was also a major concern because of the continuous period of time spent in the room by seventy people. Regulation of the air conditioning solved part of the problem.

5. **Symposium staff.** A general Symposium staff was available to handle unforeseen administrative problems that might occur during the simulation. The provision of this staff permitted the simulation staff to concentrate on the simulation experience itself.

A copy of the time schedule and agenda followed during the field test is located in Appendix H.

**Summary**

The simulation was designed and developed given the constraints of a small core staff and limited budget. A field test was held following a ten-month development period. Reactions and group responses of individuals were assessed following participation in the simulation experience. Results of data gathered are analyzed and displayed in the following chapter. Further recycling, modifying, or continuing developmental decisions are based on the data.
CHAPTER XV

EVALUATION OF SIMULATION PROCEDURES

The completion of initial steps in the development and testing of the simulation provides the structure for this chapter. Two developmental areas were considered in focusing the evaluation of the simulation: (1) elements and characteristics of the simulated and physical settings in which participants performed and (2) group reports which were generated as task products by participants.

Instruments used in collecting data included:

1. Participant responses to an opinionnaire distributed at the completion of the simulation.
2. Transcription of selected recorded group reports following each task.

Simulation Opinionnaire

The Opinionnaire consisted of thirty-five statements. A five-point Likert-type scale formed the response mode used for each statement. A range of equal intervals on a continuum from 1.00 (strongly disagree) to 5.00 (strongly agree) was used in analyzing opinionnaire data.

Sixty-four participants began the simulation. The number present during the last task was fifty-eight, a ten per cent decrease in attendance over the day and one-half session. Of the fifty-eight who completed the simulation, fifty-two responded to The Opinionnaire (90 per cent return). Participants stated their present positions as follows:
1. Administrator--22
2. Evaluator --16
3. Methodologist--14

Participants were encouraged to make written statements on The Opinionnaire which related to specific statements, a general concern, and/or the construction of The Opinionnaire itself (see Appendices I and J).

Group Recorded Responses

Following each of the five tasks and supplementary exercise, group reports were presented. Representatives from groups, randomly selected, verbally reported their group's response to simulation assignments. The reports were recorded, transcribed, and placed in outline form for analysis (see Appendix K).

Simulated and Physical Settings Related to Task Performance

Content Methods and Techniques

Statements taken from The Opinionnaire relating to content, methods, and techniques used to create the simulated setting, along with median scores of participant reaction to the statements, are listed in Table 1. Participant median scores were separated into categories according to positions (administrator, evaluator, methodologist); Figure 3 is a graphed profile.

The data in Table 1 and Figure 3 indicate respondents believed that a problem-solving setting was created in which participants did become involved.

Median scores for administrators ranged from 3.50 to 4.14, indicating that administrators generally agreed with the ten statements.
<table>
<thead>
<tr>
<th>Statement</th>
<th>Administrators</th>
<th>Evaluators</th>
<th>Methodologists</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The purpose of relating a simulation game to a real life school situation was accomplished.</td>
<td>3.98</td>
<td>4.12</td>
<td>4.00</td>
</tr>
<tr>
<td>3. The characterizations used in the audio-visual presentation were easy to identify with in terms of my past experiences.</td>
<td>4.07</td>
<td>4.15</td>
<td>3.79</td>
</tr>
<tr>
<td>4. The purpose of using audio-visual materials to make the simulation game more like a real life school situation was accomplished.</td>
<td>4.07</td>
<td>4.05</td>
<td>4.00</td>
</tr>
<tr>
<td>5. References to problems relating to reading achievement throughout the school corporation were made evident in the speeches.</td>
<td>3.55</td>
<td>3.85</td>
<td>3.94</td>
</tr>
<tr>
<td>6. The content of speeches was helpful in identifying with the simulated school corporation.</td>
<td>3.94</td>
<td>3.91</td>
<td>4.00</td>
</tr>
<tr>
<td>7. Information presented in the speeches closely follows the topics currently being discussed and associated with large urban school systems.</td>
<td>3.87</td>
<td>3.83</td>
<td>3.57</td>
</tr>
<tr>
<td>12. Materials in the file concerning past data on elementary reading programs in the entire school corporation were sufficient.</td>
<td>3.50</td>
<td>4.12</td>
<td>3.50</td>
</tr>
<tr>
<td>13. Materials in the file concerning past data on elementary reading programs between attendance districts of the school corporation were helpful.</td>
<td>4.00</td>
<td>3.95</td>
<td>3.72</td>
</tr>
<tr>
<td>14. Materials in the file concerning past data on elementary reading programs were realistic in terms of the program descriptions.</td>
<td>3.86</td>
<td>4.00</td>
<td>3.25</td>
</tr>
<tr>
<td>22. The telephone call from the superintendent to the evaluator, Dr. Leve, added a realistic work priority dimension to the simulation game.</td>
<td>4.14</td>
<td>4.25</td>
<td>4.07</td>
</tr>
</tbody>
</table>
FIGURE 3

PROFILE OF MEDIAN SCORES FOR TEN STATEMENTS RELATED TO THE SIMULATED SETTING
Administrator's median scores were lowest for statements 5 and 12. Statement 5 referred to whether or not reading problems were evident in the introductory speeches. The reason reading achievement problems were not overly apparent may be due to other "noise" created in the materials. Noise in this sense refers to interesting, but unimportant information used in creating a problem situation. The speeches given in the slide-tape presentation may require a reduction of nonessential problem information in order for essential reading achievement references to be highlighted and internalized by participants in the simulation.

Statements by participants indicated a need for a re-evaluation of the content materials used in developing the setting. For example, a College of Education administrator said:

Some superintendents did not enjoy the image of the fuddy-duddy superintendent or the intense emphasis on a very traditional school system in which the solution to problems is conservative and unworkable.

A local level administrator commented:

Omit references to Ohio or unique to Ohio only. Board meeting room, etc., would not be typical of a big city system setting—strictly rural. Your visual (slide) on the Board meeting does not have the superintendent in the right role. He is assuming the role of the Board president.

Finally, a state level administrator responded:

I personally would prefer some problem other than a reading problem. I have a 'thing' because so much money in our state has been spent on inadequate reading problems.

All three comments acknowledge the complexity of creating a setting that has universal appeal and authenticity based on a participant's background and experience.

Statement 12, referring to the sufficiency of file materials covering the entire school district's elementary reading program, was
also scored low by administrators. The reason for the score is not apparent.

Median scores for evaluators ranged from 3.85 to 4.25. The range indicates that evaluators agreed more to the statements than administrators or methodologists (range from 3.25 to 4.07).

Methodologists had low median scores on statements 7, 12, and 14. Statements listed in order referred to:

1. Topical issues discussed in urban school districts and in the speeches.
2. Sufficiency of file materials covering the entire school district's elementary reading program.
3. Realistic materials used in describing past elementary reading programs.

Verbal evidence is not available to support the methodologists' rationale for the scores.

Time

Figure 4 reports each simulated activity, the time allotted participants to react to the activity, and time allotted for interaction between groups. The total time of the simulation was 12\(\frac{1}{2}\) hours. The four and one-half hours allotted for participants to perform tasks are the basis for the statements in Table 2. Figure 5 is a graphed presentation of the median scores.

Task 1 was rated extremely low by all three groups. Evaluators recorded the lowest score of 2.50. The reason accounting for the low score was the overload of materials participants were expected to read, internalize, and then act upon within an hour's time. Several written responses taken from The Opinionnaire support the analysis. For example,
### Simulation Activity

<table>
<thead>
<tr>
<th>Simulation Activity</th>
<th>Performance Time</th>
<th>Interaction Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Introduction and Overview of Simulation Game</td>
<td>1/2 hour</td>
<td></td>
</tr>
<tr>
<td>B. Slide-Tape Orientation and Group Interaction</td>
<td>1 hour</td>
<td>1 hour</td>
</tr>
<tr>
<td>C. Task 1</td>
<td>1 hour</td>
<td>1 hour</td>
</tr>
<tr>
<td>D. Task 2</td>
<td>3/4 hour</td>
<td>1 hour</td>
</tr>
<tr>
<td>E. Task 3</td>
<td>3/4 hour</td>
<td>1 hour</td>
</tr>
<tr>
<td>F. Task 4</td>
<td>3/4 hour</td>
<td>1 hour</td>
</tr>
<tr>
<td>G. Supplementary Exercise</td>
<td>1/2 hour</td>
<td>combined</td>
</tr>
<tr>
<td>H. Task 5</td>
<td>3/4 hour</td>
<td>1 hour</td>
</tr>
<tr>
<td>I. Evaluation of Simulation</td>
<td>1 hour</td>
<td></td>
</tr>
<tr>
<td>J. General Discussion and Recommendations for Simulation</td>
<td></td>
<td>1/2 hour</td>
</tr>
</tbody>
</table>

**Total:** 7 hours 5½ hours

---

**FIGURE 4**

TIME IN HOURS UTILIZED FOR SIMULATION ACTIVITIES AND INTERACTION BETWEEN GROUPS
<table>
<thead>
<tr>
<th></th>
<th>Administrators</th>
<th>Evaluators</th>
<th>Methodologists</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. The time allotted to perform the task of developing a strategy for delineating information relative to the cause of the reading problem was adequate. (Task 1).</td>
<td>2.83</td>
<td>2.29</td>
<td>2.50</td>
</tr>
<tr>
<td>20. The time allotted to perform the task of developing a strategy for determining the best alternative from those presented in Task 2 was adequate.</td>
<td>3.60</td>
<td>3.85</td>
<td>3.83</td>
</tr>
<tr>
<td>21. The time allotted to perform the task of identifying and assessing potential barriers that might be built into the process evaluation plan was adequate. (Task 3).</td>
<td>3.84</td>
<td>3.80</td>
<td>4.00</td>
</tr>
<tr>
<td>25. The time allotted to perform the exercises of applying the CIPP Evaluation Model to House Bill 204 was adequate.</td>
<td>3.83</td>
<td>3.88</td>
<td>3.83</td>
</tr>
<tr>
<td>26. The time allotted to update the product evaluation design involving past and future reading programs was adequate. (Task 4).</td>
<td>3.81</td>
<td>3.92</td>
<td>4.00</td>
</tr>
<tr>
<td>30. The time allotted to developing a report providing information relative to the outcome of the objectives established for students and teachers in the reading improvement program was adequate. (Task 5).</td>
<td>3.83</td>
<td>3.95</td>
<td>4.05</td>
</tr>
</tbody>
</table>
FIGURE 5
PROFILE OF MEDIAN SCORES FOR SIX STATEMENTS RELATED TO TIME ALLOCATED FOR TASK PERFORMANCE
... Task 1 requires more time to assimilate information ... Task 1 too much overload ... More time for Task 1 ... Adjust time constraints to the size of the task ...

Participants generally agreed that lack of time was not a factor in the other four tasks and exercise. Administrators tended to rate time statements slightly lower than the other two groups.

Gaming Strategies

"Gaming strategies" refers to methods and techniques used to communicate between the simulated settings and the participants. The data in Table 3 and Figure 6 indicate respondents believed that gaming strategies were successful in six of the eight strategies used for maintaining participant communication with and involvement in the simulation.

Statement 10 referred to the assistance offered by the secretary when participants lack sufficient background materials for performing a particular task. Evaluator's median score (2.17) was the lowest of the other two groups. A suggestion was made on the topic in a statement made by a methodologist from a College of Education.

... much time was wasted in my group in rather aimless contributions, with little leadership in focusing on points involved. More careful preparation of leaders is needed.

An implication from the statement and scores of participants is that materials are not self-instructional, requiring a trained instructor in order to provide a worthwhile learning experience.

Statement 19 referred to the adequacy of file materials available for assessing alternative strategies (Task 2) from different value positions. A 2.47 median score was recorded for methodologists. One implication may be interpreting in greater detail the phrase "value positions" for methodologists and other participants prior to involvement with Task 2 materials.
### TABLE 3
MEDIAN SCORES FOR EIGHT STATEMENTS ON GAMING STRATEGIES RELATED TO TASK PERFORMANCE

<table>
<thead>
<tr>
<th>Statement</th>
<th>Administrators</th>
<th>Evaluators</th>
<th>Methodologists</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. The person who played the part of the characterized secretary, Innes T'Know, was enthusiastic about the role he or she played in the game.</td>
<td>3.82</td>
<td>4.05</td>
<td>3.83</td>
</tr>
<tr>
<td>9. The secretary was knowledgeable about the information on file.</td>
<td>4.27</td>
<td>4.39</td>
<td>4.25</td>
</tr>
<tr>
<td>10. The secretary moved the game along by offering advice when my group lacked necessary background materials for performing a particular task.</td>
<td>3.33</td>
<td>2.17</td>
<td>2.83</td>
</tr>
<tr>
<td>11. Memos were clearly stated as to the tasks required to be performed by me, the evaluator.</td>
<td>3.90</td>
<td>3.90</td>
<td>3.66</td>
</tr>
<tr>
<td>16. The information available for developing a context evaluation design for uncovering basic causes of the reading problem was helpful in completing Task 1.</td>
<td>3.85</td>
<td>3.81</td>
<td>3.83</td>
</tr>
<tr>
<td>18. Progress reports were helpful in updating information as to decisions made in time intervals between actual task performances.</td>
<td>4.03</td>
<td>4.04</td>
<td>4.17</td>
</tr>
<tr>
<td>19. Materials in the file available for assessing alternative strategies from different value positions in order to solve the reading problem were sufficient. (Task 2).</td>
<td>2.85</td>
<td>3.13</td>
<td>2.42</td>
</tr>
<tr>
<td>28. Materials in the file available for making a simple and clearly stated progress report to the Board in reference to reading program objectives were sufficient. (Task 5).</td>
<td>4.05</td>
<td>4.07</td>
<td>3.75</td>
</tr>
</tbody>
</table>
FIGURE 6

PROFILE OF MEDIAN SCORES FOR EIGHT STATEMENTS RELATED TO GAMING STRATEGIES FOR TASK PERFORMANCE
Feedback Mechanisms

The feedback to participants was provided through (1) model responses following Task 1, 4, 5, and the supplementary exercise and (2) presentations given in the form of group reports following each task. Intergroup interaction following the group reports was permitted within the time schedule presented in Figure 4. The median scores of participants to statements reflecting the effectiveness of the feedback mechanisms are located in Table 4 and graphed in Figure 7.

Administrators indicated a slight displeasure with the simulation's ending.

Evaluators at the state agency level suggested the following:

After each task and discussion have instructor review and elaborate on concepts, skill and procedure, tasks, etc., just under use . . .

Another suggested,

Provide a reward system.

A third commented,

If you expect to be able to predict outcomes, then you had best provide sufficient cues to insure those outcomes. Establish or change gaming strategies—on (1) learning elements of CIPP Model (language, concepts, etc.) and then (2) application of the model.

Physical Arrangements

The simulation was presented in a room equipped and arranged to seat and acoustically and visually allow for the involvement of the sixty-four participants. In order to maximize participant involvement, small groups consisting of six or seven individuals were assigned to tables arranged throughout the room. Assignments to groups were made on the basis of an individual's position (administrator, evaluator, methodologist) and the level of educational agency he or she represented (federal, state, local, college of education, research and development
<table>
<thead>
<tr>
<th></th>
<th>Administrators</th>
<th>Evaluators</th>
<th>Methodologist</th>
</tr>
</thead>
<tbody>
<tr>
<td>17. The simulated response to Task 1 was realistic in terms of the information made available.</td>
<td>3.87</td>
<td>3.69</td>
<td>3.83</td>
</tr>
<tr>
<td>24. The simulated response for applying the CIPP Evaluation Model to House Bill 204 was realistic in terms of the theory and information available.</td>
<td>3.88</td>
<td>3.75</td>
<td>3.63</td>
</tr>
<tr>
<td>27. The simulated response to Task 4 was realistic in terms of the information made available.</td>
<td>3.85</td>
<td>3.97</td>
<td>4.05</td>
</tr>
<tr>
<td>28. The simulated response to Task 5 was realistic in terms of the information made available.</td>
<td>4.00</td>
<td>4.06</td>
<td>3.95</td>
</tr>
<tr>
<td>31. The final simulated recommendations that the in-service teacher training be extended from grades 4 through 6 in order to continue to improve student reading achievement throughout the school corporation was an excellent conclusion for the simulation game.</td>
<td>3.50</td>
<td>3.75</td>
<td>3.83</td>
</tr>
<tr>
<td>32. The simulated responses made by the simulation authors after Tasks 1, 4, 5, and the supplementary exercise was adequate as a feedback device.</td>
<td>3.88</td>
<td>3.61</td>
<td>3.79</td>
</tr>
</tbody>
</table>
FIGURE 7
PROFILE OF MEDIAN SCORES FOR SIX STATEMENTS ON SIMULATED RESPONSES AS A FEEDBACK MECHANISM
The participants' opinions of the physical setting characteristics relating to room arrangement and team size and composition were assessed in part by responses to the statements listed in Table 5. A profile of median scores is contained in Figure 8.

For the most part, participants had positive opinions on the physical setting characteristics cited in The Opinionnaire. A few individual statements that may be of importance for future revisions of the simulation focus directly on the composition and size of the evaluation groups or teams. For example, a federal level administrator stated:

I was bothered by the waste of time in getting a consensus from the group to use as an individual action. Could this game be structured so that it could be done individually?

A College of Education administrator commented:

Rotate members of groups so you get to know more people and more ways of thinking.

Concurring with the above statement, a local level administrator related:

We should have re-grouped for each session to provide greater opportunities for interaction with other participants.

An evaluator from a College of Education maintained:

... In addition, instructions on what was required of the team were poorly presented and the heterogeneity of the group resulted in one or two people 'carrying' it.

Finally, on the issue of using a team composed of individuals of varying educational skills and charged to act as one evaluator, a professor in a College of Education stated:

Restructure so that I am not simulating the role of an evaluator, but am instead simulating a role as a member of a professional evaluation team ...

Conclusion

In conclusion, the simulation did accomplish its main objective. Statement 1 on The Opinionnaire stated:
<table>
<thead>
<tr>
<th>Statement</th>
<th>Administrators</th>
<th>Evaluators</th>
<th>Methodologists</th>
</tr>
</thead>
<tbody>
<tr>
<td>33. The numerical size of the evaluation team seated at my table allowed for adequate participation on my part in the problem-solving tasks of the simulation game.</td>
<td>4.10</td>
<td>4.10</td>
<td>4.06</td>
</tr>
<tr>
<td>34. The composition of the evaluation team in terms of theoreticians and/or practitioners seated at my table was helpful for developing strategies for performing tasks in the simulation game.</td>
<td>4.21</td>
<td>3.94</td>
<td>4.06</td>
</tr>
<tr>
<td>35. The physical arrangement of the room was adequate for my fullest participation in the simulation game.</td>
<td>3.91</td>
<td>4.05</td>
<td>3.83</td>
</tr>
</tbody>
</table>
FIGURE 8

PROFILE OF MEDIAN SCORES FOR THREE STATEMENTS RELATED TO PHYSICAL ARRANGEMENTS FOR TASK PERFORMANCE
The objective of becoming familiar with the theory of evaluation presented in the Phi Delta Kappa monograph through a simulation game was accomplished.

Median scores for administrators (3.86), evaluators (3.67), and methodologists (3.94) relate directly to the statement.

The developmental area considered in focusing the first part of the simulation's evaluation concentrated on elements and characteristics of the simulated and physical settings in which participants performed. These included: (1) content, methods, and techniques used in creating the simulated setting; (2) time allotted for performance activities; (3) gaming strategies used to enhance communication between materials and participants; (4) feedback mechanisms for reinforcing conceptual comprehensions; and (5) physical arrangements of room and team composition for maintaining participant involvement in the simulation. Median scores of administrators, evaluators, and methodologists have been displayed to indicate a need in some cases for possible alternative approaches in future simulation development activities.

Group Reports

The second part of this chapter is an analysis of selected group reports with the theory of evaluation and CIPP Model. Following each of the five tasks and the supplementary exercise, a representative of a group would make an oral presentation on how the group responded to the task. Groups were randomly selected. The oral presentations were recorded, transcribed, and placed in outline form for analysis. Outlines for all groups are found in Appendix K.

The rationale for organizing the data in such a format was for the purpose of a three-part analysis. First, figures representing a selected group response for each task will be presented. In order for
each group to be represented once, selection was made subjectively. Also on a subjective basis, reports were selected for completeness as perceived by the investigator. This procedure may have a built in positive bias.

Second, figures are presented containing the theoretical structures found in the Phi Delta Kappa book and used in developing the simulation. Figures are directed at the elements found in the four types of evaluation in the CIPP Model and in evaluation design.

Third, judgmental decisions are included that were made by the investigator regarding which statements in group reports correspond with the theory. A coding system was devised to make comparisons between elements of group reports and theory understandable. Numbers and letters preceding each statement or phrase were identified for coding purposes. Single spaced statements or phrases in the narrative refer to responses taken directly from group reports. Double spaced references relate to theoretical statements and phraseology.

Before beginning the analysis by tasks, Table 6 is presented. Table 6, "A Matrix for Relating Types of Evaluation to Informational Gathering Systems as Presented through Tasks Assigned in the Simulation," is a summary of what the developers of the simulation used as a guide in designing the experience.

**Task 1**

Group V's report (Figure 9) indicated an awareness of the purpose of context evaluation (Figure 10). In attempting to provide a rationale for determining the adequacy of present reading program objectives, the group listed:
## Table 6

A Matrix for Relating Evaluation to Informational Gathering Systems as Presented Through Tasks Assigned in the Simulation

<table>
<thead>
<tr>
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</table>
| **Concepts:**  
Context evaluation;  
Delineating information relative to the cause of the problem (planning). | **Concepts:**  
Input evaluation;  
Obtaining information for identifying best alternative from those suggested (structuring). | **Concepts:**  
Process evaluation;  
Delineating information for identifying potential barriers that might occur (implementing). | **Concepts:**  
Product evaluation;  
Delineating and providing information to the decision maker that focuses on monitoring past accomplishments in order to identify discrepancies between performance and objectives of the In-service Training Program (recycling). | **Concepts:**  
Product evaluation;  
Providing information to the decision maker showing that substantial progress toward improving students' reading achievement has been accomplished (recycling). |
| **Activities:**  
(1) To develop a design to get at the root of the reading problem.  
(2) To develop a report for the decision maker identifying the causes of the problem. | **Activities:**  
(1) To develop a plan for assessing the alternatives identified.  
(2) To select the best alternative strategy from those listed.  
(3) To develop a report for the decision maker in which all alternatives are assessed and the best strategy accepted. | **Activities:**  
(1) To assess potential barriers to the program, assessed by the decision maker, by building a rationale for:  
a. Time allowed for total program  
b. Large group instruction versus small group instruction  
c. Use of closed circuit television, lectures, and demonstrations  
(2) To develop a plan that outlines procedures and techniques that could be used in an In-service program.  
(3) To develop a report for the decision maker which relates to activities (1) and (2). | **Activities:**  
(1) To develop a report for the Superintendent indicating how well the program accomplished two of the three major objectives. |
Group V

A. Initial action:
   1. asked secretary for:
      a. information about objectives of reading program
      b. achievement and other test scores
      c. copies of reading tests (detailed descriptions of) - (Ed. not in files)
      d. description of reading program
         (i) only general descriptions available
      e. information about experimental programs in the junior high school
         (i) only general descriptions available

B. Design for superintendent
   1. might include the entire school district or
   2. might include three schools in
      a. Evalopattah, South, and Central attendance districts
      b. rationale: test results showed they had reading problems.
   3. reading problem causes may not be the same in all schools, but may vary with attendance districts
   4. concerned with teacher turn-over
      a. Is it consistent in all schools
   5. source of reading achievement problem
      a. real or artificial problem created by norm reference data
      b. what skills are not being achieved
      c. community reports on problems (how real are they)
      d. additional specification of the objective skills not being attained by In-Ur's students

C. Success of context evaluation
   1. provided some useful information in understanding the problem of the school district

D. Needs:
   1. a thorough description of reading program requiring an input evaluation
   2. a good description of the operation of the reading program requires process evaluation
   3. data about: (product evaluation)
      a. nature of reading objectives being achieved
      b. extent to which they are being achieved
   4. Questions of congruency between test scores and objectives need to be asked
      a. are the tests measuring the objectives or are they measuring other objectives which are not listed for the schools
      b. are objectives being measured congruent with the (reading) program

E. Problems:
   1. delineating the specificity of the design
      a. general design for superintendent
      b. interpreting the term design for superintendent

FIGURE 9

GROUP V REPORT: OUTLINED RESPONSE TO TASK 1 IN SIMULATION
CONTEXT EVALUATION

A. Purpose:
1. Provides a rationale for determining objectives by:
   a. describing desired and actual conditions of the relevant environment
   b. identifying unmet needs and opportunities
   c. diagnosing problems that prevent opportunities from being unused

B. Characteristics
1. macro-analytic
2. fundamental philosophy
3. basis for control

EVALUATION DESIGN

A. Delineation of informational needs
1. Definition of system
   a. model of system

2. Specifications of decisions
   a. describe antecedents
   b. statement of decision setting
   c. establish criterion variables

3. Statement of evaluation policies
   State:
   a. access to data sources
   b. access to base and evaluative information
   c. role of evaluation authority
   d. role of evaluation responsibility
   e. budget and resource limitations for evaluation
   f. scheduling limitations
   g. reporting policies

4. Statement of evaluation assumptions
   Explicate:
   a. sampling assumptions
   b. treatment assumptions
   c. measurement assumptions
   d. analysis assumptions
   e. model of evaluation design

B. Plan for obtaining information
C. Plan for providing information

FIGURE 10

A THEORETICAL STRUCTURE OF EVALUATION FOR EXAMINING GROUP RESPONSES TO TASK 1

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89 Stufflebeam, Educational Evaluation and Decision Making, p. 328.

90 Ibid., pp. 237, 241, 251, 257.
D. Needs
1. a thorough description of present reading program
   • • •
3. data about . . . nature of reading objectives being achieved . . . extent to which they are being achieved
4. questions of congruency between test scores and objectives . . .

A second purpose, diagnosing problems, that faced the group in their role as an evaluator included:

E. Problems
1. delineating the specificity of the (evaluation design) . . .
   a. general design for superintendent
   b. interpreting the specific term design . . .

The group indicated a knowledge of context evaluation as macroanalytic by these statements:

B. Design for superintendent
1. might include the entire school district
3. reading problem causes may not be the same in all schools but vary by attendance districts
5. source of reading achievement problem

The level of specificity of the evaluation design in terms of delineation of informational needs varied. Statements reflecting an awareness of the definition of system being evaluated, specifications of decisions, statement of evaluation policies, and statement of evaluation assumptions varied. Following is a breakdown of the tasks of delineation and the specific activity areas touched on by the group.

A-l. Definition of system—delimiting to manageable proportions the domain in which the evaluator works.

A. Initial actions
1. asked secretary for
   a. information about objectives . . .
   b. achievement and other test scores . . .

B. Design for superintendent
1. might include entire school district
2. might include 3 schools . . .
A-2. Specification of decisions by

a. Describing antecedents—description of events, pressures, and information that lead up to a need for an evaluation effort.

B. Design for superintendent
   5. source of reading achievement problem
      a. real or artifactual problem created by norm reference data
      c. community reports (how real are they)

b. Stating decision setting—role or roles in which legal decision making authority resides.

   The activity was not explicated in the report.

c. Establishing criterion variables—variables to be measured by the operationalization of the questions to be answered.

   B-5-b. What (reading) skills are not being achieved?

D-4. Questions of congruency between test scores and objectives need to be asked
   a. are the tests measuring the objectives or are they measuring . . .
   b. are objectives being measured congruent with . . .

d. Statement of decision rules—rules relating to the selection of and priorities established for questions to be answered.

   The activity was not explicated in the report.

A-3. Statement of evaluation policies—the statements identify the degrees of freedom the evaluator has in his work by—

a. Access to data source—specified records and sources of information available to the evaluator for data.

   The activity was not explicated in the report.

b. Access to base and evaluative information—base and evaluative information is a policy for data utilization.

   The activity was not explicated in the report.
c. **Role of evaluation authority**—organizational focus upon who has the authority to evaluate.

   The activity was not explicated in the report.

d. **Role of evaluation responsibility**—organizational focus upon who identifies and carries out various evaluative activities.

   The activity was not explicated in the report.

e. **Budget and resource limitations**—statements reflecting amount of support and source of funds available.

   The activity was not explicated in the report.

f. **Scheduling limitations**—information must be timely to service decision making.

   The activity was not explicated in the report.

g. **Reporting policies**—evaluation is a continuous process from the first steps of delineating information through the time all decisions have been made. Reports must fit audiences and go through proper channels during the elongated process.

   The activity was not explicated in the report.

A-h. **Statement of evaluation assumptions**—statements go beyond the sophisticated, assumption meeting methodology available. Creativity and ingenuity on the part of the evaluator is a part of the assumptions.

a. **Sampling assumptions**—process of selecting data, concerns of how much evidence should be developed and/or whether that evidence is sufficient to justify conclusions drawn. Several statements reported have inferences on this topic including:
A. Initial action
1. asked secretary for
   a. information about objectives . . .
   b. achievement and other test data . . .
   c. copies of reading test . . .
   d. description about reading program
   e. information about experimental programs
B. Design for superintendent
3. reading problem causes may not be the same in all schools
5. sources of reading achievement problem
C. Success of context evaluation
1. provide some useful information in understanding the problem of the school district

b. Treatment assumptions—evaluating the effect(s) of a program, activity, or process. The treatment process is highly dependent on the definition of system to be evaluated. References by

D. Needs
1. a thorough description of reading program requiring an input evaluation
2. a good description of the operation of the reading program requires process evaluation
3. data about (product evaluation)
   a. nature of reading objectives being achieved
   b. extent to which they are achieved

c. Measurement assumptions—statements concerning the relationship of the measuring device to the phenomena being measured.

A-c. Copies of reading tests (detailed descriptions of)

d. Analysis assumptions—classes of assumptions including (1) descriptive analysis—kinds of questions asked—what you want to know—a depiction of what is and (2) comparative analysis—a comparison of groups.

A. Initial action
1. asked secretary for
   d. description of reading program
   e. information about experimental program
Group II's report (Figure 11) indicated an awareness of the purpose of input evaluation. In general, the group went about the task of assessing four alternatives for operationalizing objectives established for getting at the reading problem. Figure 12 provides a list of elements under Input Evaluation which justify actions in Group II's report. For example, to A-1-b (Strategies for achieving program goals) the group responded by suggesting:

C. Secondary actions
1. committee should look at the possibility of operating one or more plans simultaneously (pilot alternatives)

Criteria for weighing the alternatives included characteristics of input evaluation the group suggested:

C-2. Expanding criteria by more detailed listings by which to:
   a. judge feasibility
   b. cost

The level of specificity of the evaluation design in terms of a plan for obtaining information varied. Statements reflecting an awareness of data collecting procedures, organization of data, and analysis of data were clouded by delineation procedures taken by the group. The data indicates the group attempted to define the system in which the evaluator would later plan for obtaining information. For example:

B. Point of reference
1. We wanted the superintendent and assistant superintendent and the committee to know that the alternatives, arrived at, were not congruent with the teacher's perception of the problem.
2. Value judgments on alternatives should come from the teachers.

Once the system is delineated the evaluator then considers a plan for obtaining information. Elements of the plan include:
Group II

A. Initial action:
1. started with the assumption that these are the four alternatives
2. a decision was to be made on them by someone else
3. we should suggest how this should be done

B. Point of reference:
1. we wanted the superintendent and assistant superintendent and the committee to know that the alternatives, arrived at, were not congruent with the teachers perception of the problem.
2. value judgements on alternatives should come from the teachers
   a. they should have major input
   b. rating scale need be developed for teachers to respond to as a whole or a random sample.
   c. rationale: need some feeling of what they would like to do since they did not perceive this as a problem.
   d. involvement by teachers could be in making one of the four choices or by the committee using the (rating scale) data.

C. Secondary actions:
1. Committee should look at the possibility of operating two or more plans simultaneously (pilot alternative)
2. Expand the criteria by more detailed listings under each criterion to:
   a. judge feasibility
   b. cost
   c. university's ability to put a summer course together

FIGURE 11

GROUP II REPORT: OUTLINED RESPONSE TO TASK 2 IN SIMULATION
INPUT EVALUATION

A. Purpose:
1. Provides information for determining how to utilize resources to meet program goals by identifying and assessing:
   a. relevant capabilities of the responsible agency
   b. strategies for achieving program goals
   c. designs for implementing a selected strategy

B. Characteristics
1. macro-analytic
2. cost-benefit focused

EVALUATION DESIGN

A. Delineation of informational needs
B. Plan for obtaining information
   1. Collection of data
      a. state information source
      b. state instrumentation
      c. describe collection conditions
   2. Organization of data
      a. unit of organization
      b. storage and retrieval requirements
      c. quality control procedures
   3. Analysis of data
      a. unit of analysis
      b. analysis method
      c. analysis facility
C. Plan for providing information

FIGURE 12
A THEORETICAL STRUCTURE OF EVALUATION FOR EXAMINING GROUP RESPONSES TO TASK 2

91 Ibid., p. 336.
92 Ibid., p. 270.
B-1. **Collection of data**—the outcomes of this task include:

a. Stating information source—establishing population, sample size, procedures, etc.

B-2. Value judgments on alternatives should come from the teachers

a. they should have major input

b. Stating instrumentation—specifies the items of information necessary to operationalized criterion variables.

B-2-b. Rating scale needs to be developed for teachers to respond to . . .

c. Describe collection conditions—establishing responsibility for administering instruments, setting the schedule for instrument administration, and establishing the setting for administration of instruments.

The activity was not explicated in the report.

B-2. **Organization of data**—the activities of this task include:

a. Unit of organization—establishing levels of disaggregation required and the scoring coding format to be followed.

B-2-d. Involvement by teachers could be in making one of the four choices or by the committee using the (rating scale) data.

b. Storage and retrieval requirements—establishing coding formats, etc.

The activity was not explicated in the report.

c. Quality control procedures—established to insure that data and the information derived from them are not invalidated through the accumulation of controllable error.

The activity was not explicated in the report.

B-3. **Analysis of data**—the activities of this task include:

a. Unit of analysis—the level of aggregation for comparisons,
associations, or relationships being made.

The activity was not explicated in the report.

b. Analysis method—dependent on unit of analysis; for example, the comparison of two frequency distributions vs. the comparison of two summary statistics.

The activity was not explicated in the report.

c. Analysis facility—statement of equipment and space needs for analysis.

The activity was not explicated in the report.

Task 3

Group IV's report (Figure 13) indicated an awareness of the purpose of process evaluation. In general the group went about the task of planning for periodic feedback to persons responsible for implementation. Figure 14 provides a list of elements under Process Evaluation which justify actions in Group IV's report. For example to A-1-a (Detecting or predicting defects in procedural design . . .)

A-2. We would monitor each school by using stratified random sampling (applied) to the process and content (of program).

Strategies for providing feedback included:

B-1. To identify and monitor potential sources of failure. The group suggested:

A-3. Objectives would be measured in terms of teachers
a. What are they getting out of it?
b. Are they accomplishing the initial goals set up?

The level of specificity of the evaluation design in terms of delineation of information needs varied. Statements reflecting an awareness of the process of delineation are found under the following tasks and activities. Delineation of information needs by:
Group IV

A. Initial action:
1. We need money placed in the budget for the evaluation of this project (in-service program) — assures its ongoing nature.
2. We would monitor each school by using stratified random sampling (applied) to the process and content (of program)
   a. process would be examined in terms of the time factor
   b. content in terms of interviews
3. Objectives (would be measured) in terms of the teachers
   a. what are they getting out of it?
   b. are they accomplishing the (initial) goals set up?
4. We would use the committee that originally set up the workshop to help develop alternatives:
   a. for process evaluation
   b. content evaluation
5. We want the committee to build into their plan "an index of satisfaction," using a scale of one to five,
   a. if the index read less than 3 this would indicate to the superintendent that he could plug in numerable alternatives
      (1) 3 hours of T.V. time for 14 days (a concern of Sure's)
      (2) we would package a number of alternatives for him
PROCESS EVALUATION 93

A. Purpose:
1. Provides periodic feedback to persons responsible for implementing plans and procedures by:
   a. detecting or predicting defects in the procedural design or its implementation during the implementation stages
   b. providing information for programmed decisions
   c. maintaining a record of the procedure as it occurs

B. Strategies
1. Identify and monitor potential sources of failure
2. Select and service programmed decisions
3. Note main features of project design

EVALUATION DESIGN 94

A. Delineation of informational needs
1. Definition of system
   a. model system
2. Specifications of decisions
   a. describe antecedents
d. statement of decision rules
   b. statements of decision setting
c. establish criterion variables
3. Statement of evaluation policies
   State:
   a. access to data sources
   b. access to base and evaluative information
c. role of evaluation authority
d. role of evaluation responsibility
e. budget and resource limitations for evaluation
f. scheduling limitations g. reporting policies
4. Statement of evaluation assumptions
   Explicate:
   a. sampling assumptions
d. analysis assumptions
   b. treatment assumptions
e. model of evaluation
c. measurement assumptions

B. Plan for obtaining information
C. Plan for providing information

FIGURE 14

A THEORETICAL STRUCTURE OF EVALUATION FOR EXAMINING GROUP RESPONSES TO TASK 3

93 Ibid., p. 349.
94 Ibid., pp. 237, 241, 251, 257.
A-1. **Definition of system**—delimiting to manageable proportions the domain in which the evaluator works.

A-2. We would monitor each school . . .
A-4. We would use the committee

a. **Model of the system**—defined in terms of its boundaries, elements, and characteristics of the elements.

A-2. We would monitor each school by using stratified random sampling applied to the process and content of program.

a. process would be examined in terms of the teachers
b. content in terms of interviews

A-2. **Specification of decisions** by

a. **Describing antecedents**—description of events, pressures, and information that lead up to a need for an evaluation effort.

A-4. We would use the committee that originally set up the workshop to help develop alternatives

a. for process evaluation
b. content evaluation

b. **Stating decision setting**—role or roles in which legal authority resides.

The activity was not explicated in the report.

c. **Establishing criterion variables**—variables to be measured by the operationalization of the questions to be answered.

A-2. We would monitor each school . . .

a. process would be examined in terms of the time factor
b. content in terms of interviews

d. **Statement of decision rules**—rules relating to the selection of and priorities established for questions to be answered.
A-5. We want the committee to build into their plan "an index of satisfaction" using a scale of one to five
a. if the index read less than 3 this would indicate to the superintendent that he could plug in numerable alternatives

A-3. Statement of evaluation policies--statements identify the degrees of freedom the evaluator has in his work by--
a. Access to data source--specified records and sources of information available to the evaluator for data.
   The activity was not explicated in the report.
b. Access to base and evaluative information--base and evaluative information is a policy for data utilization.
   The activity was not explicated in the report.
c. Role of evaluation authority--organizational focus upon who has the authority to evaluate.
   The activity was not explicated in the report.
d. Role of evaluation responsibility--organizational focus upon who identifies and carries out various evaluative activities.

A-4. We would use the committee that originally set up the workshop to help develop alternatives for process and content evaluation.

e. Budget and resource limitations--statements reflecting amount of support and source of funds available.
   Not clearly explicated but generally mentioned:
   A-1. We need money placed in the budget for evaluation of this project . . .

f. Scheduling limitations--information must be timely to service decision making.
   The activity was not explicated in the report.
Reporting policies—evaluation is a continuous process from the first steps of delineating information through the time all decisions have been made.

The activity was not explicated in the report.

Statement of evaluation assumptions—statements go beyond the sophisticated, assumption meeting methodology available. Creativity and ingenuity on the part of the evaluator is part of the assumption.

a. Sampling assumptions—process of selecting data; concerns of how much evidence should be developed and/or whether that evidence is sufficient to justify conclusions drawn.

b. Treatment assumptions—evaluating the effects of a program, activity, or process. The treatment process is highly dependent on the definition of system to be evaluated.

c. Measurement assumptions—statements concerning the relationship of the measuring device to the phenomena being measured.

d. Analysis assumptions—classes of assumptions including:
   (1) descriptive analysis—kinds of questions asked—what you want to know—a depiction of what is and (2) comparative analysis—a comparison of groups.
A-3. Objectives would be measured in terms of the teachers
a. What are they getting out of it?
b. Are they accomplishing initial goals set up?

e. Model of evaluation design—based on analysis assumptions
that the evaluator knows the general configuration of
information to provide.

The activity was not explicated in the report.

Task 4

Group III's report (Figure 15) indicated an awareness of the purpose of product evaluation. In general the group went about the task of measuring and interpreting attainments. All six statements in the report justify awareness of product evaluation elements. Figure 16 provides a list of strategies under Product Evaluation which correlate closely with Group III's report. For example B-2 (Measuring criteria associated with objectives of an activity).

A-1. To meet objective number 1, we would sample all of our teachers with a check list.

Another example B-3 (Comparing measurement with standards).

A-2. Give the same reading test in a kind of pre-post test kind of operation.
A-5. Check other staff members for efforts of theirs in changes they have noticed following implementation or re-programming.
A-6. Reading specialists for aid . . .
a. Their observations could add creditability to our effort . . .

The level of specificity of the evaluation design in terms of delineation of informational needs and a plan for providing information varied. Delineation activities focused on definition of system and statement of evaluation assumptions.

A-1. Definition of system—delimiting to manageable proportions the domain in which the evaluator works.
Group III

A. Initial action:
1. To meet objective number 1, we would sample all of our teachers with a check list.
2. Give the same reading test in a kind of pre-post test kind of operation.
3. Attitude: review last couple of years "samples" on attitudes (tests) including administrators, pressure groups, teachers, and parents; plus students.
4. After working with Heritage for two years we'd like to bring a (little more curriculum data) to bear on the operation
5. Check other staff members for efforts of theirs in changes they have noticed (following) implementation or re-programming.
6. Reading specialists for (aid) on materials and staff.
   a. Their observations could add creditability to our effort in the Board's eyes.

FIGURE 15

GROUP III REPORT: OUTLINED RESPONSE TO TASK 4 IN SIMULATION
PRODUCT EVALUATION

A. Purpose:
1. Measures and interprets attainments not only at the end of a project cycle, but often as necessary during the project term.

B. Strategies:
1. Devising operational definitions of objectives
2. Measuring criteria associated with objectives of an activity
3. Comparing measurement with standards
4. Making rational interpretations of outcomes

EVALUATION DESIGN

A. Delineation of informational needs
1. Definition of system
   a. model of system
2. Specifications of decisions
   a. describe antecedents
   d. statement of decision rules
   b. statement of decision setting
   c. establish criterion variables
3. Statement of evaluation policies
   State:
   a. access to data sources
   b. access to base and evaluative information
   c. role of evaluation authority
   d. role of evaluation responsibility
   e. budget and resource limitations for evaluation
   f. scheduling limitations
   g. reporting policies
4. Statement of evaluation assumptions
   Explicate:
   a. sampling assumptions
   d. analysis assumptions
   b. treatment assumptions
   e. model of evaluation design
   c. measurement assumptions

B. Plan for obtaining information
C. Plan for providing information
1. Preparation of reports
   a. define report audiences
   d. establish reporting schedule
   b. depiction of reporting levels
   c. description of reporting mode

FIGURE 16

A THEORETICAL STRUCTURE OF EVALUATION FOR EXAMINING GROUP RESPONSES TO TASK 4

95 Ibid., p. 353.
96 Ibid., pp. 237, 241, 251, 257, 303.
A-1. ... we would sample all teachers
A-3. Attitude: review last couple of years "samples" on attitude tests
A-5. Check other staff members . . .
A-6. Reading specialists for and . . .
a. Model of the system—defined in terms of its boundaries, elements, and characteristics of the elements.
A-2. Give the same reading test to teachers in a kind of pre-post test kind of operation.
A-4. Statement of evaluation assumptions—statements go beyond the sophisticated, assumption meeting methodology available. Creativity and ingenuity on the part of the evaluator is part of the assumption.
a. Sampling assumptions—process of selecting data; concerns of how much evidence should be developed and/or whether that evidence is sufficient to justify conclusions drawn.
A-1. To meet objective number 1, we would sample all of our teachers with a check list.
b. Treatment assumptions—evaluating the effects of a program, activity, or process. The treatment process is highly dependent on the definition of system to be evaluated.
A-4. After working with Heritage . . . bring a little more curriculum data to bear.
A-5. Check other staff members for efforts of theirs in changes they have noticed . . .
c. Measurement assumptions—statements concerning the relationship of the measuring device to phenomena being measured.
A-1. . . . sample all teachers with a check list
d. Analysis assumptions—classes of assumptions including: (1) descriptive analysis—kinds of questions asked—what you want to know—a depiction of what is and (2) comparative analysis—a comparison of groups. Descriptive data:
Comparative analysis:

A-2. ... reading test in a kind of pre-post test kind of operation

C-1. c. Descriptions of reporting mode--when reports are due to decision makers and other clients (timeliness).

The activity was not explicated in the report.

A plan for providing information was not covered in depth by Group III. The plan covered one activity in preparation of reports, but failed to acknowledge elements of report dissemination. Preparation of reports includes:

C-1. a. Definition of report audiences--primary decision makers, mandated audiences, decision influences, and other clients for information.

The activity was not explicated in the report.

b. Depiction of reporting levels--dichotomized into micro vs. macro levels in this design schema. Designations are used to define level of detail of information to be reported, as compared to the level in a hierarchy of reporting audiences.

The activity was not explicated in the report.

c. Description of reporting mode--establishing the reporting setting, report content, and reporting media. Report contents would include:

A-1. ... sample all teachers with check list
A-2. ... a kind of pre-post ...
A-3. Attitude ... samples on attitudes (tests)
A-4. ... a little more curriculum data ...
A-6. Reading specialists ...
   a. their observations
d. Establish reporting schedule—when reports are due to
decision makers and other clients (timeliness).

The activity was not explicated in the report.

Task 5

Group X's report (Figure 17) indicated an awareness of the pur-
pose of product evaluation. In general the group went about the task of
measuring and interpreting at the end of the project cycle. Figure 18
provides a list of strategies under Product Evaluation which, in part,
correlate closely with Group X's report. For example B-2 (Measuring
criteria associated with objectives of an activity).

B-3. We set standards for teacher behavior based on:
   a. survey instrument which indicated the community
      had a negative attitude toward teachers on
      issues of:
         (1) performance of students
         (2) behavior in classroom (teachers)

Another example B-3 (Comparing measurement with standards).

B-4. Used data (on teachers) and contrasted this with
   experiences of other districts across the country.

The level of specificity of the evaluation design in terms of a
plan for providing information varied. Before the group did any provid-
ing of information, they focused on (1) delineation of information and
(2) obtaining of information. For example in delineation, an element is
defining the system to be evaluated.

A. Initial actions
   2. We decided to lay out some causes for the communi-
ty's attitude.

Another element criterion variables was expressed through statements.

3. We decided to do an evaluation of the causes which
   would affect community attitudes. Focusing on:
   a. the long range plan had not been communicated
      very clearly to the community
Group X:

A. Initial actions:
1. We looked at the last report (Task 4) in order to complete this task.
2. We decided to lay out some possible causes for the community's attitude.
3. We decided to do an evaluation of the causes which would effect community attitudes. Focusing on:
   a. the long-range plan had not been communicated very clearly to the community
   b. the expectations of the curricula were not correct in terms of gain
   c. the expectations were plainly unrealistic
4. Our presentation to the school board was structured to get at these typical causes for community dissatisfaction or their attitudes toward the program.

B. Presentation format (relating to teacher in-service program plan)
1. Utilized multi-media charts and graphs
2. Program lay out emphasizing
   a. what we were attempting to accomplish
   b. what the various elements were
   c. what the elements were meant to achieve
3. We set standards for teacher behavior based on:
   a. survey instrument which indicated the community had a negative attitude toward teachers on issues of:
      (1) performance of students
      (2) behavior in classroom (teacher)
   b. wanted to show some definite changes in behavior
   c. giving teacher results to students
4. Used data (on teachers) and contrasted this with experiences of other districts across the country.

C. Closing comments: (an after-thought)
1. Because our product and means of attaining that product were such a "significant" success, we would consider evaluating the U.S. Office of Education.
2. We were trying to get at the board's unrealistic expectations with the above statement.
3. As a result of the very tactful approach on our part at the board meeting, members acted very positively toward us.

FIGURE 17

GROUP X REPORT: OUTLINED RESPONSE TO TASK 5 IN SIMULATION
PRODUCT EVALUATION

A. Purpose:
   1. Measure and interpret attainment not only at the end of a project cycle, but often as necessary during the project term

B. Strategies
   1. Devising operational definitions of objectives
   2. Measuring criteria associated with objectives of an activity
   3. Comparing measurement with standards
   4. Making rational interpretations

EVALUATION DESIGN

A. Delineation of informational needs
B. Plan for obtaining information
C. Plan for providing information
   1. Preparation of reports
      a. define report audience(s)
      b. depiction of reporting levels
      c. description of reporting mode
      d. establish reporting schedule
   2. Dissemination of reports

FIGURE 18

A THEORETICAL STRUCTURE OF EVALUATION FOR EXAMINING GROUP RESPONSES TO TASK 5

97 Ibid., p. 353.
98 Ibid., p. 303.
b. the expectations of the curricula were not correct in terms of gain
c. the expectations were plainly unrealistic

Obtaining information includes a task involving collection of data. One element of the task is stating instrumentation (specifying items of information necessary to operationalize criterion variables).

The group's example included:

3. We set standards for teacher behavior based on:
   a. survey instrument which indicated the community had a negative attitude toward teachers on issues of:
      (1) performance of students
      (2) behavior in classroom (teachers)

The plan for providing information includes activities concerned with audiences receiving reports, timeliness and frequency of reports, and effectiveness of information provided.

A-4. Our presentation to the school board was structured to get at these typical causes for community dissatisfaction or their attitudes toward the program.

Specific tasks and activities when providing information include:

C-1. Preparation of reports—task includes:
   a. Definition of report audiences—primary decision makers, mandated audiences, decision influencers, and other clients for information.
   A-4. Our presentation to the school board was structured . . .
   b. Depiction of reporting levels—micro vs. macro levels in designations used to define levels of detail of information.
   A-3. . . . causes which would effect community attitudes
      a. the long range plan had not been communicated . . .
      b. expectations of curricula were not correct . . .
   c. Description of reporting mode—establishing the reporting setting, report content, and reporting media.
B. Presentation format (relating to teacher in-service program)
   1. Utilized multi-media charts and graphs
   2. Program lay out emphasizing
      a. what we were attempting to accomplish
      b. what the various elements were
      c. what the elements were meant to achieve
   3. b. wanted to show some definite changes in behavior
   4. Used data on teachers and contrasted this with experiences of other districts across the country.

d. Establishing reporting schedule—when reports are due to decision makers . . .

The activity was not explicated in the report.

C-2. Dissemination of reports—the task area is comprised of procedures for transmission of and publication of reports.

The activity was not explicated in the report.

Supplementary Exercise

Figure 19 represents Group VI's response to a request from the superintendent in the simulation. The request was for the evaluator to apply CIPP concepts to a topic aside from the reading problem. The desired effect was to breakdown the linear process of tasks built into the simulation. Creation of the supplementary exercise was construed as an out-of-line request for the evaluator.

7. We wanted the superintendent to know that we felt we were "sold out"—we would use a "watered down" version of CIPP to let him know of our displeasure.

A second purpose of the exercise was to allow participants to self-evaluate their abilities to bring CIPP concepts to bear on a problem lacking clear definition. A result of the actions of one group is expressed in Figure 19.
Group VI

A. Initial actions:
1. We would get a hold of Charles Smith on our staff, who's an expert in communications and public relations.
2. In the talk for Voteski, Smith would emphasize:
   a. accountability
   b. responsibility
3. In the first part of the speech it would be mentioned that House Bill 204 would help establish priorities,
   a. community needs and opportunities
   b. economic resources in various areas
4. We weren't going to use the word context or CIPP at all.
5. House Bill 204 gives the (community) an opportunity to:
   a. get good programs from school to school
   b. develop programs based on "varied group" inputs
   c. involve community leaders in program development
6. Central staff would make certain programs were carried out according to state laws and requirements as well as federal and/or local.
7. We want the superintendent to know that we felt we were "sold out" -- we would use a "watered down" version of CIPP to let him know of our displeasure.
8. We wanted some released time to build CIPP into the program exemplified by the bill itself.
9. We wanted to build in a term "effective application" for reading the "kids" (affected by House Bill 204) needs based on assessment.

FIGURE 19

GROUP VI REPORT: OUTLINED RESPONSE
TO SUPPLEMENTARY EXERCISE
Summary

Part II of this chapter has focused on comparison of selected group reports to theoretical concepts of evaluation. Specific emphasis was placed on concepts of the CIPP Model of Evaluation. The analysis indicated that participants were aware of the four types of evaluation: Context, Input, Process, and Product. Evaluation designs presented by the groups varied in levels of detail from elements explicated in the theory. All groups reporting found it necessary to express delineation issues and concerns before they could consider obtaining or providing information. Groups displayed a greater degree of understanding of the theory in the five tasks than in the supplementary exercise.
CHAPTER V

RECOMMENDATIONS AND PROGRESS REPORT

The focus of this chapter is on (1) recommendations for revising and extending the simulation and (2) a progress report concerning the current status of the simulation. The progress report is focused on revisions and modifications which took place in preparing the simulation for field trials at a summer institute in New Hampshire and for a graduate course, Functions and Methodology of Evaluation, at The Ohio State University.

Recommendations

An analysis of evaluative data indicated the simulation was well received by participants and generally achieved its objectives. The acceptance and success of the existing simulation package illustrates the instructional potential of materials produced through a process of systematic development. None indicated a need for immediate goals for the refinement of the current simulation and for the development of additional training packages for educational evaluators and decision makers.

The recommended materials development tasks focus on the revision and extension of the simulation. The following three major tasks have been outlined:

1. Continue the cyclic improvement strategy by revising the current simulation on the basis of Process and Product
Evaluation data obtained during field trials.

2. Extend the simulation to cover additional cells in the CIPP Model of Evaluation.

3. Extend the response modes and feedback mechanisms in the simulation.

Task 1—Revision of Current Simulation

The data analysis indicated a need for five kinds of revisions to the simulation.

1. **Package the director's or presenter's role in the simulation.**

   Immediately following the field test, the presenter's role had not been written and packaged in terms of his administrative and instructional responsibilities. To insure uniformity and consistency in future field testing and to assist the transportability, it will be necessary to:

   a. Prepare materials which serve as a simulation presenter's guide considering such issues as:

      (1) size of participating group (members in small and total group)

      (2) mix (professional backgrounds, experiences, and responsibilities) of participating individuals

      (3) physical arrangements (facilities and equipment)

      (4) time schedules (block and segmented)

      (5) selection of supporting staff (instructional staff, observers)

      (6) orientation of participants to the nature and purpose of simulation

      (7) orientation of participants to strategies and ground rules relating to their role in the simulation

      (8) description of elements of CIPP theory the participant will work with during the simulation experience
(9) description of instructional roles of observers seated with each small group

b. Develop an alternative approach to the instructional introduction such as a prepackaged audiovisual presentation.

c. Test any administrative or instructional materials developed with presenters, staffs, and participants similar to those who will administer, instruct, and participate in the simulation.

d. Revise administrative and instructional materials relating to presenter's role until they can be demonstrated to satisfy prescribed requirements.

2. **Reconstruct the pretask orientation.** The simulation consists of five evaluation design tasks preceded by a pretask audiovisual orientation to the setting in which the evaluations are to take place. It is desirable to:

a. Screen out irrelevant information not utilized in task performance.

b. Refine procedures for distributing pretask file documents to participants.

c. Edit present materials.

d. Reorganize and create visual slide materials to focus on key issues presented in speeches including:

   (1) graphs of demographic data

   (2) map of entire school district and specific attendance districts

   (3) newspaper articles referencing issues discussed

   (4) calendars and clock faces indicating simulated time periods

   (5) issues presented classified in terms of needs, problems, and opportunities

   (6) charts reflecting positive and negative value statements as presented

e. Test the revised materials and procedures.
3. **Redefine linkage roles.** Linkage roles consist of those played by the secretary and participant team leader for each group of simulation participants. The field trial indicates these roles should:

a. Have written guidelines that prescribe and standardize their activities.

b. Be examined for the necessity and/or hindrance to growth of participant skills.

c. Be explored in terms of potential new or redesigned "live" roles that could add to the utility of the simulation.

d. Test and continue to update the materials and roles until they can be demonstrated to satisfy prescribed requirements.

4. **Refine the participant's reference documents.** These are items that simulate filed documents (reprints and statistical analysis) produced at an evaluation center as well as evaluation designs developed as simulated responses to the same tasks undertaken by the participants. The current simulation can be improved by:

a. Editing the existing documents.

b. Preparing more explicit descriptions of the expected behavior of participants in terms of the CIPP Model and intended use of the simulation reference documents.

c. Adding to or eliminating from the current documents in order to increase the probability of occurrence of expected participant behavior.

d. Obtaining model responses for each participant task from recognized evaluation experts for use as simulated responses and as "take home" documents for future reference.
e. Designating the relationship of progress reports, used to update participants, to the specific evaluation activities of delineating, obtaining, and providing which preceded or followed a participant task within a particular type of evaluation.

f. Testing and revising the documents until they can be demonstrated to satisfy prescribed requirements.

5. Strengthen the cues used to discriminate between knowledge and value dimensions of evaluation. The simulation is placed in a simulated setting in which an awareness of value orientation is important. On the basis of the field trial, the value dimensions require strengthening. This can be accomplished by:

a. Developing a rationale for value and knowledge components of the simulation as it relates to the CIPP Model.

b. Building into the present materials value-oriented cues (i.e., newspaper articles, casual telephone conversation, disclosure of a confidential memorandum, etc.) expressing individual and group value positions.

c. Allowing time intervals within the simulation's total time schedule to be spent by participants in discussing value-oriented statements found in speeches and reference documents.

d. Building value statements into simulated responses.

e. Testing and revising the exercises and materials until they can be demonstrated to satisfy prescribed requirements.

Task 2—Extend the Simulation

The simulation requires participants to perform tasks in the role of an evaluator for each of the four types of evaluation—Context, Input, Process, and Product. An effort was made to have them perform one or two evaluation activities (delineating, obtaining, providing) within each type of evaluation. However, a task was not included for every cell of the CIPP Model utilized to service the decision-making process. For
training purposes, trainers should have access to simulated materials that permit them to select simulated tasks from all of the cells of the model. To reach this goal the simulation can be extended through three activities:

1. Build tasks for cells not covered by the current simulation which focus on separate roles and activities for the evaluator and decision maker.

2. Build alternative tasks for cells in the current simulation as well as in future materials development activities.

3. Develop the procedure and mechanics that allows the presenter the option to select from available tasks so that a meaningful sequencing is preserved in terms of presentations to specific audiences (administrators, evaluators, combination, etc.).

The activities for this task will be considerably more time consuming and costly than those of task 1. They will require extensive cooperative work with practicing administrators, evaluators, and curriculum specialists. Initial prototype materials will need to be tested and revised with small groups before large group field trials are attempted. In general, the systematic materials development procedures such as those described by the Operations Model in Chapter VI could be used. In addition to the materials development staff at the Evaluation Center, the development activities could make use of specialists from the Educational Administration and Developmental Faculties of The Ohio State University, other educational agencies (e.g., UCEA), and simulation experts from noneducational agencies (e.g., Abt associates).
Task 3—Extend the Response Modes and Feedback Mechanisms of the Simulation

The second extension of the simulation consists of two major activities that are intended to reduce the complexity. The simulated tasks are divided into small steps and the means for providing participants feedback on each subtask is expanded:

1. Convert each design task into a series of small steps, such as a series of progress reports and/or rough draft reports that build toward the final design task. The small step task components will be built to require participant actions from different levels of the cognitive domain (knowledge, comprehension, application, etc.).

2. Build into the simulation the position for a "feedback team" that provides prepared and/or constructed reactions to each participant group's subtask response. The feedback could include a weighted score for each small step task assignment so that participants compete against a standard or against each other.

Similar to task 2, these activities will require considerable personnel and financial resources. Attempts should be made to involve practitioners and development and simulation specialists from groups other than those associated with the Evaluation Center.

Conclusion

A Model Training Program for the training of evaluators like the one being currently implemented by the Evaluation Center staff at The Ohio State University and consortium agencies throughout the United States needs a "model" classroom laboratory focused on viable content, scope of
coverage, and physical design to serve the learning needs of the trainees. The simulation developed is a start in this direction. Using the simulation as a base for further exploration into the area of simulated instructional materials has provided the catalyst for recommending the three tasks embodied in the first part of the chapter. Hopefully, funding and continued staff effort can move the project from its prototype following the Symposium to expanded systematic development of training materials for educational administration, evaluation, research, development, and diffusion personnel.

**Progress Report**

A progress report focused on two field trials of the simulation following the Symposium will be presented. The first took place on August 4 through 7, 1970, at a workshop held at the University of New Hampshire. A class of graduate students enrolled in *Functions and Methodology of Evaluation* at The Ohio State University during the Autumn Quarter 1970 formed the audience for the second field test.

Although the data were gathered at both field tests, the intent of this section of Chapter V is not to describe or analyze in depth the results. The focus will be on highlights of each presentation that caused a revision or modification of the original simulation. The results are presented to serve as implications for future developers desiring to restructure the simulation.

**New Hampshire**

A group of twenty-six individuals attending the New Hampshire Workshop on Research Planning and Evaluation were provided the opportunity to participate in the simulation. The major revisions or modifications
to the original materials were (1) adjusting of time schedule and (2) installing a panel of experts (feedback).

Time Schedule

Participants were allowed four days (six hours per day) to work with the simulation in contrast to the twelve hours allotted at the Symposium. Data relating to time statements were collected and analyzed at both field tests (see Table 7). The data, relating to task 1, indicated that a total median score of 2.47 was recorded on a five-point scale by Symposium participants. A time adjustment (lengthened) at New Hampshire caused participants responding to the same statement to increase the total median score to 4.00. Although, by contrast, other time statements and subsequent median scores from Table 7 do not indicate as great a variation between the New Hampshire and Symposium groups as task 1, they do show a difference.

The actual effect of adequate time could be considered from the quality of products produced by groups allotted more time. Unfortunately, the groups which took part at both field tests were not of equal backgrounds in terms of administrative, evaluative, and methodological skills related to evaluation and decision making. Also, group report data were not gathered at the New Hampshire workshop.

Panel of Experts (Feedback)

In order to provide feedback (instruction) to participants as they performed a specific task, a panel of evaluation experts was formed consisting of Egon G. Guba, Daniel L. Stufflebeam, and Robert L. Hammond. The panel interacted with the groups as requested in an attempt to interpret and instruct participants in the process presented via the simulation.
**TABLE 7**

MEDIAN SCORES FOR SIX STATEMENTS ON TIME RELATED TO TASK PERFORMANCE ON DATA FROM SYMPOSIUM AND NEW HAMPSHIRE FIELD TESTS

<table>
<thead>
<tr>
<th></th>
<th>Symposium</th>
<th>New Hampshire</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. The time allotted to perform the task of developing a strategy for delineating information relative to the cause of the reading problem was adequate (Task 1).</td>
<td>2.47</td>
<td>4.00</td>
</tr>
<tr>
<td>20. The time allotted to perform the task of developing a strategy for determining the best alternative from those presented in Task 2 was adequate.</td>
<td>3.73</td>
<td>3.89</td>
</tr>
<tr>
<td>21. The time allotted to perform the task of identifying and assessing potential barriers that might be built into the process evaluation plan was adequate (Task 3).</td>
<td>3.88</td>
<td>3.89</td>
</tr>
<tr>
<td>25. The time allotted to perform the exercise of applying the CIPP Evaluation Model to House Bill 204 was adequate (Supplementary exercise).</td>
<td>3.86</td>
<td>4.11</td>
</tr>
<tr>
<td>26. The time allotted to update the product evaluation design involving past and future reading programs was adequate (Task 4).</td>
<td>3.89</td>
<td>4.21</td>
</tr>
<tr>
<td>30. The time allotted to developing a report providing information relative to the outcome of the objectives established for students and teachers in the reading improvement program was adequate (Task 5).</td>
<td>3.93</td>
<td>4.11</td>
</tr>
</tbody>
</table>
A consultant role was in an *ad hoc* fashion developed by the panel on site.

The panel's role, defined as the secretary's at New Hampshire, in terms of effectiveness can best be described from a statement and participant-response recorded in Appendix I. The statement read:

The secretary moved the game along by offering advice when my group lacked necessary background materials for performing a particular task.

The PDK Symposium's total group median score to the statement was recorded as 2.69 on a five-point scale falling between the verbal description of disagree and neutral or undecided. At New Hampshire the total group median score was recorded as 4.06, falling slightly above agree on the scale. An implication is that participants need experts in evaluation to interact with them as they perform each task. Reasons focused on understanding materials and expectancies of participants in terms of task performances are inherent in the above implications.

In summary, a few revisions or modifications were made at New Hampshire aside from the time schedule and use of a panel of experts. The time interval between the initial field test, late June and mid-August, was a contributing factor. Verbal comments from experts at the second field test indicated a positive reception of the simulation by participants, who in general were skeptical about the workshop's program.

**Class (Autumn Quarter)**

Twenty-two graduate students enrolled in *Functions and Methodology of Evaluation* participated in a revised and modified version of the simulation. The four primary revisions included (1) designed cues from the presenter, (2) efforts to highlight the value-oriented dimension in materials, (3) changing focus of task 1, and (4) expansion of the
secretary's role to include observation of work patterns and reactions of individuals in small groups.

Presenter's Cues

A time schedule was designed to fit the group needs of student participants. The schedule included three, two and one-half hour in-class sessions and two, two-hour out-of-class sessions. The presenter, working from written cues in narrative form, attempted to focus students on their group tasks.

The "presenter's introduction" included four key elements involving clarification of:

1. What constitutes a simulation experience.
2. The elements of CIPP the participant would be involved and working with during the simulation experience.
3. The ground rules relating to the participant's role as an evaluator during the simulation experience.
4. The secretary's role (observer) seated with each small group.

Preceding and following each task, the presenter updated participants regarding:

1. Participant accomplishments in terms of working with CIPP theory. Specifically, group reports completed by participant groups were discussed in relationship to theoretical boundaries built into materials (Task 1—type—context evaluation—process—delineation).
2. Participant progress in terms of the simulated time span of the experience. Specifically, the simulated experience covered approximately two years. Students were cued as to
where each task performed fell during the linear time interval.

The role of the presenter was expanded to include that of an instructor teaching students to apply CIPP theory in simulated practice. The new role dimension was in conjunction with the original intent of the presenter's position, which included administering and coordinating the entire experience.

Value-oriented Materials

A criticism of the simulation was its lack of focus on individual values which constitute an integral part of the new definition of evaluation. In order to ameliorate the change, the following revisions were made:

1. A telephone call was presented at the beginning of the simulation. The call attempted to focus participants on their need to listen for value-oriented statements during their first simulated meeting with the superintendent.

2. Time was built into the schedule for each group to discuss their individual perceptions of value-oriented statements and implications following the slide-tape interview with the superintendent.

3. A feedback form was given each participant following the meeting with the superintendent which included two value-oriented statements with six implications for future decision making.

4. The time schedule was adjusted to allow participants to discuss value-oriented statements and implications presented via slide-tape during the simulated orientation meeting.
5. A feedback form expressing values of simulated characters speaking at the orientation meeting was given to each participant. Specifically, positive values (that which is good, that which "ought to be") and negative values (that which is bad, that which "should be avoided") was categorized for each speaker.

The heavy cueing on value-oriented statements was not built directly into other points of the simulation for reasons relating to time and scheduling.

Task 1 Focus

In the initial materials, task 1 was planned for participants to design a plan for getting at the reasons for the reading problem in the simulated school district. In revising task 1, more focus was given participants by requesting (via memo) that an outline be prepared for the superintendent which delineates the issues to be confronted prior to designing any plan of evaluation. Revisions for task 1 included:

1. Modifying the initial task 1 memorandum.

2. Writing a new exemplar response form for task 1 with elements focused on five general questions which could take place during initial interfacing with the decision maker. Questions delineated were:

   a. What is to be evaluated?

   b. Who will use the information provided by the study?

   c. When will the information be needed?

   d. What portion of the evaluation budget will be allocated to the problem and what potential additional financial resources are likely to be available for the evaluation effort?
Given the present budget and time limitation, what are the priorities to be used in focusing the evaluation on the reading problem?

A sidelight to restructuring task 1 was the use of cued response forms for selected groups prior to their performance. Similar cued and noncued response forms were used in the tasks two and three. The analysis of data reflecting the benefit to participants of cued or noncued response forms is inconclusive at this time.

Secretary's Role (Observer)

The secretary seated with each group was requested to handle requests from the participants for file data, as well as observe the work patterns and individual reactions of the group. To facilitate the handling of file data, a form was given to each participant indicating by title documents on file. The desired effect was to eliminate guessing about what documents were available for reference and to give the secretary additional time to observe. The results of the observation provide the following set of guidelines for future developers:

1. Participants need to interact with an individual (instructor) who is knowledgeable about CIPP and the simulated materials if the simulation is to be a controllable learning experience.

2. Audiovisual materials need to be sequenced differently. Inattentiveness by participants indicate shortening or re-focusing presentation.

3. Participants need to be cued about how an evaluator works, before expecting participants to perform tasks (what does the evaluator do sequentially and specifically in task performance during context evaluation?).
Participants need visuals relating CIPP theory to simulated practice before using them as cues when performing tasks.

Conclusion

In conclusion, steps have been made to revise and modify the simulation that were costly only in terms of man hours. Additional steps and change in the status of the simulation will require funds spent for development personnel, as well as for additional cueing via slide-tape mechanisms and transparencies focusing on both theoretical content and specific characteristics and references related to the simulation. From the previous effort a significant step will be made in structuring the simulation as a learning device for evaluators, decision makers, and others.
A developmental simulation project operations model is presented in this chapter. The origin and basis of the model is a result of the detailed simulation developmental effort described in Chapter III. The model presented is intended for use within an educational setting and context characterized by specific constraints delineated in the study's proposal. They include a limited budget, a small operations core staff, and a short time schedule for a project's completion.

The figures, within the chapter, consider two dimensions of a developmental simulation process model. In general, the dimensions focus on (1) materials development guidelines and (2) administrative organization. The combined effects of both dimensions are reflected in terms of tasks (events and activities) completed during various project time phases. The desired result of such a coordinated administrative and developmental effort is a product (e.g., the simulation).

Specifically, materials development guidelines encompass a linear set of decision types for purposes of focusing the organizational and administrative factors in a project. The four decision types, included in the simulation process model, are planning, structuring, implementing, and recycling.

Administrative organization of this project involves (1) a working
relationship and understanding between the support\(^9^9\) and development agencies and (2) a task breakdown of events and activities. The latter element maximizes the use of available financial and personnel resources during various time phases of a project. Figures in the chapter are designed to indicate the importance of having both elements occurring concurrently during various project phases. The degree of involvement between the support and development agencies varies according to decisions of specific skills and knowledges (expertise) afforded the development agency during initial contract agreements. To graphically describe degrees of agency involvement, during various time phases of the model, a solid line is used to indicate reporting responsibility and direct involvement by both agencies and personnel in decisions relating to the simulation project.

The remainder of this chapter consists of five figures (phases) for developing, organizing, and administering a simulation project operations model.

**Phase 1 (Figure 20)**

Preplanning

The decisions made in agreement by both the support and development agencies determine the project's framework. Conditions underlying the organization and operation of the project are delineated by the

---

\(^9^9\)Support agency— an organization with a specific developmental need in terms of current function and operation. By design (i.e., U.S.O.E.) or lacking internal expertise, the organization sublets finances, etc., to a developmental agency for the purpose of acquiring extended support in meeting stated needs.

\(^1^0^0\)Development agency— operates within an educational setting and meets the contracted needs of a support agency by providing developmental services.
PROJECT PRE-PLANNING

Decisions determining conditions underlying the organization and operation of the simulation project

ORGANIZATION

SUPPORT AGENCY
 Identifies a need(s) outside the domain of agency's current operations and functions

DEVLOPMENT AGENCY
 Contracts to meet special need(s) by providing specific simulation project expertise

REPRESENTATIVE
 Individual, creditable and knowledgeable regarding agency's goals and conceived need(s)

REPRESENTATIVE
 Individual, creditable and knowledgeable regarding agency's goals and production capabilities

PRE-PLANNING ACTIVITIES
 Preliminary negotiations between representatives of both agencies

GOAL
 Establish general purpose for focusing project planning

FINANCES
 Prepare budget for planning and acquiring resources to fulfill contract

PERSONNEL
 Contract by development agency to perform project services

TIME
 Establish duration period for scheduling and managing other activities

CONSULTANTS
 Utilize as needed by director and assistant director for:
  1. specific information source
  2. audit of operations

DIRECTOR
 Manages and controls project within an university agency setting

ASSISTANT DIRECTOR
 Assists director in:
  1. gathering and synthesizing information for decision making
  2. decision making (consensus)

FIGURE 20
PROJECT PRE-PLANNING (PHASE 1): PRODUCTION OF SIMULATION WITHIN AN EDUCATIONAL SETTING
agencies. Project constraints and opportunities in terms of finances, time, and personnel are negotiated.

Organization

Four dimensions of organization interact and accountability procedures are established during the preplanning phase of the project. Specifically interaction involves:

1. Support agency. A decision-making body identifies a need(s) outside the domain of its current operations and functions. A decision is made by the group to contact an outside agency to investigate the plausibility of the need being met.

2. Support agency representative. An individual, creditable and knowledgeable concerning the agency's goals and conceived need(s), is selected to represent the agency.

3. Development agency. An educationally based decision-making body with a partial mission to provide research services to other agencies. The agency provides the service within the framework of its own instructional and developmental areas of expertise.

4. Development agency representative. An individual, creditable and knowledgeable concerning the agency's missions and production capabilities, is selected to represent the agency.

Activities

Preliminary negotiations between representatives begin with the support agency's attempt to define its need(s) within the domain of the development agency's capabilities and expertise. The development agency attempts to place the project being defined into a domain that is
congruent with its mission within an educational agency and other presently operational projects. To accomplish a common framework of negotiation, four activities occur including:

1. **Goal setting.** A general goal is established by both representatives for the purpose of defining the need(s) both conceptually and pragmatically for further negotiation.

2. **Finances.** A figure (dollar) is presented in order for a budget to be prepared.

3. **Personnel.** A part of the budget focuses on skills of people (staff) to manage and function within the project defined parameters. Three essential personnel elements in an educationally based project include:
   a. **Director.** With management and knowledge of the topic skills who understands and can control a project within an educational setting.
   b. **Assistant Director.** A part of the project's core staff, numbering one or many, with special skills required to carry-out the various project dimensions.
   c. **Consultants.** Extensions of the core staff's expertise. They are contracted as needed in the project to serve as specific informational sources and as operation auditors (outside evaluators).

4. **Time.** The duration period contracted for by the support agency. In an educational setting, the academic year (nine months) can become a general time line.
Planning

Once the development agency assumes project responsibility, a planning phase is started in an effort to:

1. Orient staff toward identification of elements and characteristics of the instructional content and media to be used in development.
2. Establish project objectives in terms of what the project is to achieve.

Organization

Communication patterns between the support and development agencies, as well as the project staff and development agency, are necessary project accountability factors. Communication and accountability methods and linkages include:

1. Support agency. Satisfied with preplanning project negotiations, the decision-making body needs to be informed, through its representative, of decisions and progress made during the planning phase.
2. Support agency representative. Assuming a rapport has been established between agencies and representatives, a continued awareness of project decisions and progress should be maintained with this individual. A status report issued at the termination of a phase is a desirable method of maintaining interagency accountability.
3. Development agency. As a responsible decision-making body with several ongoing tasks, records or accounts of activities need to be systematically kept. Records should contain
Decisions related to:
1. orienting staff toward identification of elements and characteristics of the instruction content and media
2. establishing project objectives

**SUPPORT AGENCY**
Informed as to decisions and progress made during the planning phase

**DEVELOPMENT AGENCY**
Keeps records of information gathered and utilized in making planning decisions resulting in project progress

**REPRESENTATIVE**
Aware of planning decisions and progress (status report)

**REPRESENTATIVE**
Aware of rationales behind planning decisions resulting in project progress (objectives)

**DIRECTOR**
Responsible for:
1. identifying sources of information for making planning decisions
2. formulating project objectives
3. developing function analysis system of control

**CONSULTANTS**
Utilized by core staff as:
1. source of information on simulations
2. source of information on content
3. auditor of operations and outcomes of objectives

**ASSISTANT DIRECTOR**
Assists director by:
1. gathering information
2. synthesizing information for decision making
3. aiding in formulating project objectives

**PLANNING ACTIVITIES**
Staff identifies:
1. elements of theory for content of simulation
2. characteristics of simulation adaptable to developmental setting (given non-planning constraints)

**TASKS**
- **COUNCIL MEET**
- **WORKSHOP EXPERIENCE**
- **INTERVIEW**
- **BIBLIOGRAPHIC REFERENCE**

**PROJECT PLANNING (Phase 2): PRODUCTION OF A SIMULATION WITHIN AN EDUCATIONAL SETTING**

**FIGURE 21**
project information gathered and utilized in making planning decisions. A status report developed by the agency should be sent following the planning phase.

4. Development agency representative. Continually aware of project's progress through formal (memorandums) and informal (verbal) contacts with staff. Specifically, the rationale behind project decisions determining objectives should be explicated.

5. Director. Accountable directly to both agency representatives. His responsibilities include:
   a. Identifying sources of information for basing planning decisions.
   b. Formulating project objectives.
   c. Developing a functions analysis system for controlling staff and resources in terms of specific activities to be performed.

6. Assistant director. Assists director by gathering information, synthesizing information, and formulating project objectives. In a project with a limited core staff (one to three individuals) decision making takes place by consensus.

7. Consultants. Utilized as sources of information for simulation (media) and instructional content to expand core staff's knowledge base. Consultants may take the form of course instructors and professional colleagues (contracted and informal contacts). They may also serve to audit operations and decisions establishing objectives.
Activities

Planning activities are identified and concurrently carried through by the core staff. Specifically, elements of theory for establishing the simulation's content and characteristics of simulation adaptable to the developmental setting would be investigated. Tasks include:

1. **Course work.** Staff is involved with the cognitive background areas of the simulation in a teaching-learning setting.

2. **Bibliographic references.** Staff is involved with gathering available literature relevant to simulation development and design.

3. **Interview.** Staff utilizes interviewing to accomplish two purposes:
   a. To gather information from individuals and/or agencies engaged in simulation development.
   b. To establish personal rapport with an individual and his agency which may be readily renewed during various project phases.

4. **Workshop experience.** Staff should be involved with an intensive in-service program focused on simulation usage and application in educational settings. Preferably, the workshop experience should take place following initial investigations of bibliographic references and/or consultant interviews.

Phase 3 (Figure 22)

Structuring

Decisions determining means to achieve ends established as a
### GENERAL GUIDELINE

Decisions determining means to achieve ends established as a result of:

1. Establishing criteria for selecting specific simulation elements
2. Making selections based on criteria

### ORGANIZATION

#### SUPPORT AGENCY
- Informed as to decisions and progress made during the structuring phase

#### DEVELOPMENT AGENCY
- Keeps records of information gathered and utilized in making structuring decisions resulting in project progress

#### REPRESENTATIVE
- Aware of structuring decisions and progress (status report)
- Aware of rationale behind structuring decisions resulting in project progress (weighing procedural alternatives)

#### CONSULTANTS
- Utilized as:
  1. sources for judging best procedural alternatives
  2. audit operations and decisions on selecting best procedural alternatives

#### DIRECTOR
- Responsibility to:
  1. establish criteria of selection
  2. identify sources of information for selecting best procedural alternatives
  3. instruments in making final procedural decisions
  4. develop functions of control

#### ASSISTANT DIRECTOR
- Assists by:
  1. gathering information
  2. synthesizing information for decision making
  3. aiding in selecting best procedures in terms of criteria

### STRUCTURING ACTIVITIES

#### TASKS
- Staff designs simulation experience by understanding:
  1. objectives established in planning
  2. criteria for weighing alternative selections

#### THEORY COURSE
- Select elements of instructional content to be simulated

#### PILOT TEST
- Select model (pencil-paper) for testing theoretical content elements prior to producing simulation

#### PARTICIPANTS
- Select background skills and experiences determining entry level of participants

#### PERFORMANCE INDICATORS
- Select list of alternative performance indicators

#### PARTICIPANT'S ROLE
- Select simulated role determined and acting techniques to initiate participant into role

#### SIMULATION
- Select characteristics and elements of simulated setting defined

#### GAME MECHANICS
- Select methods and techniques for sustaining ongoing nature of simulation

---

**Figure 32**

INTEGRATED SIMULATION (TASK 3): PRODUCTION OF A SIMULATING SYSTEM IN EDUCATIONAL DESIGN
result of:

1. Establishing criteria for selection of specific elements and characteristics of the content and gaming mechanics of the simulation.

2. Making selections based on the criteria.

Organization

Accountability between the support and development agencies, as well as the staff and its agency, remains a factor in the project. Communication and accountability methods and linkages include:

1. Support agency. Satisfied with decisions and progress made during the project's planning phase, similar information must accompany the structuring phase. The information may require recycling, modification, or continuation decisions within certain operational activities by the agency.

2. Support agency representative. Rapport and a continued awareness of project decisions, activities, and progress should be maintained with this individual through status and informal reporting. He may serve as a buffer between his own agency and the development agency if operational recycling or modification decisions become necessary.

3. Development agency. As a responsible decision-making body, records should be kept relating to information gathered and utilized in making structuring decisions. Any evaluative information detecting flaws in the project's operation should be documented and actions taken by the agency noted.

4. Development agency representative. Aware of criteria used in weighing procedural alternatives and final structuring
decisions. Evaluative information which may cause a recycling or modification decision in terms of the project's objectives should be reported and deposited in the agency's data bank.

5. **Director.** Directly responsible to both agency representatives with specific responsibilities to:
   a. Work with staff to establish criteria for deciding between alternatives.
   b. Identify sources of information for selecting best procedural alternative in terms of established criteria.
   c. Make final procedural decisions in consensus with staff.
   d. Develop a functions analysis system for controlling staff and resources in terms of specific activities to be performed.

6. **Assistant director.** Assists director by gathering and synthesizing information for making procedural decisions by being aware of:
   a. Objectives resulting from planning.
   b. Criteria used in weighing alternative procedural selections.

7. **Consultants.** Utilized as a source for:
   a. Judging the best procedural alternatives given criteria and planning objectives.
   b. Auditing operations in selection of best procedural alternative.

**Activities**

The staff designs the simulation experience. An understanding of objectives and criteria for weighing alternative procedures is important
in making structuring decisions related to each task. Tasks occurring in a concurrent manner involve the:

1. **Theoretical content.** Elements of instructional content to be simulated are selected.

2. **Pilot test.** A pencil-paper model\(^{101}\) is selected or constructed to test the feasibility of using the content selected prior to beginning a full production of the simulation. This activity occurs one or more times throughout the structuring phase of the project.

3. **Participants.** Background skills and experiences are considered in selecting entry levels of participants selected.

4. **Performance indicators.** Lists of alternative performance indicators are considered in terms of possible behavioral outcomes in participants.

5. **Setting.** Elements and characteristics of the simulated setting are defined. Selection should not be overly extensive, creating "excess noise" that confuses the instructional intent of the simulation for participants.

6. **Participant's role.** A simulated role for participants is determined. Selection requires cueing techniques for initiating the participant into his role, as well as frequent reminders of the defined role. The tendency is for participants to react to simulated situations from the position of their real world role.

7. **Gaming mechanics.** Methods and techniques for sustaining the

---

\(^{101}\)Pencil-paper model—sequencing of simulation events with regard to content, setting, and gaming mechanics on a mock model designed and developed on paper.
ongoing nature of the simulation are selected. Communications between participants and the simulated materials are a factor.

Phase 4 (Figure 23)

Implementation

Decisions determining the carrying out of a plan of action include awareness of:

1. Objectives and procedural specifications.
2. Monitoring system to detect unforeseen barriers in the structural design.

Organization

Communication and linkages between various dimensions of the organization involve the:

1. **Support agency.** Should be informed about decisions and progress made during the implementation phase. The information may require recycling, modification, or continuation decisions within certain operational activities by the agency.

2. **Support agency representative.** Rapport and a continued awareness of project decision, activities, and progress should be maintained with this individual through the status and informal reporting.

3. **Development agency.** Records should be kept regarding information gathered and utilized in making implementation decisions. Any evaluative information detecting flaws in the project's operation should be documented and actions taken by the agency as a decision-making body noted.

4. **Development agency representative.** Should be aware of plans
PROJECT IMPLEMENTATION

GENERAL GUIDELINE

Decisions involved in carrying out an action plan include awareness of:
1. objectives and procedural specifications
2. monitoring system to detect design barriers

SUPPORT AGENCY

Informed as to decisions and progress made during the implementation phase

DEVELOPMENT AGENCY

Keeps records of information gathered and utilised in making implementing decisions resulting in project progress

ORGANIZATION

REPRESENTATIVE

Aware of implementation decisions and progress (status report)

REPRESENTATIVE

Aware of rationale behind implementing decisions resulting in project progress (methods of monitoring activities)

CONSULTANTS

Utilised to:
1. develop phases of final product
2. audit operations and decisions relating to process control and products

DIRECTOR

Responsibility to:
1. understand procedural specifications
2. establish a plan for monitoring relationship between procedural specifications and actual procedures

ASSISTANT DIRECTOR

Assists director by:
1. gathering process control information
2. synthesising information for decision making
3. developing final products

IMPLEMENTATION ACTIVITIES

Staff identifies and develops:
1. various elements making up final product
2. methods for monitoring developmental procedures and products

TASKS

FINAL PRODUCT

Develop products making up final simulation package

TRAIN PERSONNEL

Develop training procedures for individuals on presentation task

ASSESSMENT INSTRUMENTS

Develop specific instruments to measure various design phases of the simulation

FACILITY ARRANGEMENTS

Adapt facility to simulation developed

FIGURE 23

PROJECT IMPLEMENTATION (PHASE I): PRODUCTION OF A SIMULATION WITHIN AN EDUCATIONAL SETTING
used to monitor developmental efforts. Evaluative information resulting from monitoring causing recycling or modification decision to occur should be reported to the agency's decision-making body and deposited in the agency's data bank.

5. **Director.** Directly responsible to the agency representatives with specific assignments to:
   a. Understand procedural specifications.
   b. Establish a plan for monitoring relationships between procedural specifications and actual procedures (functions analysis).
   c. Make final implementation decisions in consensus with staff.

6. **Assistant director.** Assists director by:
   a. Gathering process control information.
   b. Synthesizing information for decision making.
   c. Developing phases of the final product.

7. **Consultants.** Utilized by core staff to:
   a. Develop various phases of the final product (i.e., script writing, photography, tapes, etc.).
   b. Audit operations and decisions relating to process control and the final product.

**Activities**

Staff designs and develops plans:

1. Consisting of elements relating to the final product.

Tasks include:

1. **Final products.** Products which eventually become elements
of the final simulation package need to be developed. The coordination of building the final product in terms of personnel and time is essential.

2. **Train personnel.** If the simulation is not totally a machine media device, specific roles of the presentation team should have been defined. During the implementation phase of the project, it is advisable to train individuals in their roles. Training may include knowledge of materials and their use during differing stages of the simulation as well as expected behaviors of participants.

3. **Assessment instruments.** An evaluative effort linking the final simulation as a product to future developmental activities of the project requires data. Building instruments to gather the data from the field test situation should be accomplished as the final product emerges. Instruments should gather cognitive as well as affective data from participants.

4. **Facility arrangements.** If a facility for housing the field test is selected prior to designing and developing the simulation, a situation may occur whereby the facility dictates the format of the final product. The design and development of a simulation must consider the facility but not be overly restricted by its constraints.

**Phase 5 (Figure 2b)**

**Recycling**

When actual attainments are compared to objectives, the following list of decisions are possible:
PROJECT RECYCLING

GENERAL GUIDELINE
Decisions used in determining relationship between actual attainments and objectives

SUPPORT AGENCY
Informed as to decisions and recommendations made during recycling phase

ORGANIZATION

DEVELOPMENT AGENCY
Keeps records of information gathered and utilized in making recycling decisions and recommendations for future developmental activities

REPRESENTATIVE
Aware of recycling decisions and recommendations (status report)

CONSULTANT
Utilized to:
1. participate in mini-field test
2. audit data analysis and recommendations

DIRECTOR
Responsibility to:
1. administer field test
2. assess the data in terms of objectives and actual outcomes
3. make future developmental recommendations

ASSISTANT DIRECTOR
Assist director by:
1. gathering data during and following field test
2. synthesizing information for decision making
3. aiding in development of recommendations for final status report

RECYCLING ACTIVITIES
Staff designs and conducts field tests and follow-up by participating:
1. as members of presentation team
2. in data gathering, analysis, and decision making (recommendation)

TASKS

MINI-FIELD TEST
Test simulation under conditions as close to the initial field test conditions as possible

FIELD TEST
Create an agenda for simulation presentation

DATA COLLECTION
Gather and analyze data relating to field testing of simulation

RECOMMENDATIONS
Write recommendations based on data: recycling, modification, or continuation of future development activities

FIGURE 24
PROJECT RECYCLING (PHASE 5): PRODUCTION OF A SIMULATION WITHIN AN EDUCATIONAL SETTING
1. Recycling,
2. Modification,
3. Continuation, or
4. Stopping of the simulation's development beyond the field test.

**Organization**

Communication and linkages between various dimensions of the organization include the:

1. **Support agency.** Should be informed about decisions and feedback following the field test. Members of the agency's decision-making body should be present at the field test in the roles of participants or observers.

2. **Support agency representative.** Rapport may be established by inviting the representative to participate in the field test. A final status report from the development agency should contain data collected on the simulation up to and including the field test. The report should form the bases for additional developmental decisions beyond the funding period.

3. **Development agency.** Records should be kept regarding information gathered and utilized in making recycling decisions. Members of decision-making body should observe reactions of participants during the field test. Recommendations should be made in the final status report to the support agency for future developmental decision making.

4. **Development agency representative.** Participates as observer at field test. Should be aware of assessment data gathered
and analyzed. Responsible for recording information into the agency's data bank and for the production of the final status report.

5. **Director.** Directly responsible to both agency representatives with specific assignments to:
   a. Administer the field test serving as the presenter or as an informed observer.
   b. Understand where discrepancies between actual attainments and objectives occur.
   c. Make recommendations on basis of assessment data gathered from field test.

6. **Assistant director.** Assists director by:
   a. Gathering data during and following field test.
   b. Synthesizing information for decision making.
   c. Aiding in development of recommendations for final status report.

7. **Consultants.** Utilized by core staff to:
   a. Serve as an outside evaluator of the simulation during and following field test.
   b. Audit operations and decisions relating to recommendations for future development of the simulation package.

**Activities**

The staff designs and conducts the field test and follow-up by participating (1) as members of the presentation team and (2) in data collection, analysis, and decision making (recommendations).

1. **Mini-field test.** A controlled testing of the final product should be made prior to presenting the simulation at its
scheduled test. Conditions for testing are as near the initial field test conditions as possible. Feedback can be used to make minor adjustments in the final product.

2. **Field test.** A final checklist of events necessary to the testing should be prepared. An agenda for the presentation team and participants should be available that will serve to coordinate stages of the simulation teaching flow. Assessment techniques and methods should be built into the agenda.

3. **Data collection.** Data should be collected and analyzed by both an inside and outside evaluator. The inside evaluator is a member of the development staff, but the outside evaluator should be an individual or outside agency with no prior associations with the simulation's design or development. Data from both evaluators should be in the final status report.

4. **Recommendations.** Data based recommendations should be reported in the final status report. Future recycling, modification, continuation, or stop developmental decisions should form the basis for recommendations.

**Summary**

The operations model presented has two dimensions. They are (1) materials development guidelines and (2) administrative organization. The model was created to apply to a materials development project (simulation) in an educationally based agency. Constraints under which the model was designed to operate include: a limited budget, a small core staff, and a short time period for producing a final product. Accountability and communication linkages were suggested during each of the
project's phases. Tasks, for the most part occurring concurrently, were suggested for the developer who may be considering using a simulation as an instructional media. The model is not intended to be an algorithm panacea for the simulation developer, but rather a model to create an awareness as to critical dimensions and constraints one faces in building a simulation under previously stated conditions.
APPENDIX A

BIBLIOGRAPHIC REFERENCES: SIMULATION REFERENCES AVAILABLE IN THE OHIO STATE UNIVERSITY LIBRARY


APPENDIX B

BIBLIOGRAPHIC REFERENCES: DEVELOPING URBAN SCHOOL DISTRICT SETTING
BIBLIOGRAPHY


Barth, Roland S. "The University and Urban Education." Phi Delta Kappan, LI (September, 1969), 36-40.


________. "Hey, Man, You Our Principal?" Phi Delta Kappan, LI (November, 1969), 123-128.


APPENDIX C

INTERVIEW WITH ASSOCIATE DEAN COLLEGE OF EDUCATION:
UNIVERSITY COUNCIL OF EDUCATIONAL ADMINISTRATION
SIMULATION MATERIALS
Question 1. For whom were the materials designed to be used?
Response: "Students preparing for careers in educational administrative positions. At the present the Madison Project has simulated roles for students preparing for the Superintendency, Assistant Superintendency for Business Management, Assistant Superintendency for Instructional Service, Secondary Principalship and Elementary Principalship. Time was also spent on team problems which would require interaction between various role combinations."

Question 2. How does communication among participants (their role) and simulated decision-making situations take place?
Response: "In-basket items initiate several tasks required to be performed by participants. Other techniques used include tape-recorded problems, and filmstrips with tapes."

Question 3. Are there any resource documents available for use by the participants as they go about solving simulated problems?
Response: "Yes. A complete listing of all resource documents relating to a specific role can be gotten in UCEA's general office. The secondary principalship, which I was directly involved with developing, had resource material which included a course offering booklet, a packet including (bulletins to teachers and students and a report from the superintendent), a teacher's manual and an intern's report. We also used films, filmstrips, and tapes to set up special problem-solving situations."

Question 4. In your opinion, Dr. Anderson, what are the main weaknesses in most simulation materials developed?
Response: "Most simulations lack built-in feedback to participants. Feedback should have a 'balloon effect' on participants as they respond to decision-making situations. There should be penalties attached to when participants call for additional information. For example, penalties could include (a) so much time to finish a project and penalties for requesting additional information would deduct from the maximum allotted time and (b) money (on paper) could be used to buy information not built directly into materials."
APPENDIX D

SIMULATION PARTICIPANTS LISTED
ACCORDING TO TEAM ASSIGNMENTS
SIMULATION TEAMS

The following is a finalized listing of simulation participants grouped according to current agency involvement and position at the time the simulation was presented. Those individuals marked with an asterisk (*) denote assigned group captains, whereas individuals marked with a double asterisk (**) denote staff members playing a secretary's role.

Team One

* Wayne Carle  
  Superintendent  
  Dayton, Ohio Public Schools

John Kennedy  
Assistant Professor  
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Ohio State University

George Ross  
Director of Research  
Cedar Rapids, Iowa Public Schools

Willis Ray  
Professor  
Industrial Arts Curriculum Project  
Ohio State University

Frank Nelson  
Oregon State System of Higher Education

Iris Garfield  
Director  
Division of Assessment and Coordination  
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United States Office of Education

Robert Sedoris  
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Craig Currie  
Superintendent  
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Assistant Director  
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Austin, Texas

G. F. Paulson  
State Department of Education  
Independence, Oregon
Team Three

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  Associate Director
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  Memphis State University

Robert Randall
  Director
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  Austin, Texas

** Walt Calinger
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<tr>
<th>Name</th>
<th>Title/Position</th>
<th>Institution/Location</th>
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<tbody>
<tr>
<td>Arliss Roaden</td>
<td>Acting Dean</td>
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<td>Research Associate, Center for Vocational &amp; Technical Education, Ohio State University</td>
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<td>Team Seven</td>
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<td></td>
<td>University of Georgia</td>
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APPENDIX E

DOCUMENTS UTILIZED IN CREATING PARTICIPANT'S ROLE
CREATING PARTICIPANT'S ROLE

The following three documents are presented to participants prior to beginning the simulation. The purpose is to orient the participant-evaluator to his role in the simulation. Documents include:

1. Letter of invitation to become the assistant superintendent of evaluation
2. Job descriptions (evaluation staff)
3. Simulated characterizations (used in setting)
Dear Dr. Lave:

It is with extreme pleasure that I welcome you into the position of Assistant Superintendent for Evaluation in the In-Ur Community School Corporation for the academic year 1970-71.

Our screening procedures enabled us to interview and consider several outstanding candidates for the position. Your knowledge and expertise gained as a research associate and post doctoral fellow in Research and Development at State University added an extra dimension to your qualifications. At the interview, the Board and myself were particularly impressed with your familiarity with the Context, Input, Process, and Product (CIPP) model of evaluation. Your insights achieved over the past three years as a member of the Evaluation Center's staff should be of great assistance to me and the rest of the staff as we attempt small and large scale changes in programs of the In-Ur Schools. The final deciding factor regarding your selection focused on your background experience in urban education. Serving three years as a high school mathematics instructor and two years as an elementary school principal in Gary, Indiana, undoubtedly makes you aware of the similar educational problems we are now facing in our system. Your perspectives on issues should prove an invaluable aid to the decision-making process.

I understand you will be busy until the latter part of June helping the Evaluation Center's staff hold a Phi Delta Kappa Symposium on the State campus. I am sure the experience will be worthwhile for you and the participants. It is also understood that some time will be needed to move your family to their new home in In-Ur. For this reason I am suggesting your first formal day as a staff member begin on Monday, August 24. I will schedule an appointment with you in my office at 10:00 A.M. on that date.

Again, congratulations and welcome aboard.

Sincerely,

P. R. Sure
Superintendent of Schools
Assistant Supt. for Evaluation - R. O. Lave

The Assistant Superintendent has a background in research management and an understanding of both public school operations and theoretical and practical aspects of evaluation. In general, he is responsible to the Superintendent for all matters relating to evaluation. Specific responsibilities are:

- Maintaining continuous contact with the superintendent or central administrators and project directors regarding evaluation needs
- Coordinating evaluation activities with other departments within the district
- Identifying and reducing any inhibitions toward evaluation in administrators and other school personnel
- Disseminating the purposes and advantages of evaluation to school personnel and to the community
- Directing the planning and focusing of the evaluation
- Defining staff and resource requirements and planning for meeting these requirements
- Constructing and managing a budget for the total evaluation program
- Reviewing all evaluation designs, instruments, and reports before they are used or released for distribution
- Arranging for an independent evaluation of the unit's activities
- Writing or approving the evaluation sections of new proposals
- Supervising and coordinating the evaluation activities, training, research and consulting performed by members of his staff.

Evaluation Coordinator - Charles Smith

This person is responsible for coordinating all evaluation

well as with the project directors and their staffs. When working with any project's support personnel, he will insure that they are familiar with any unique conditions of the project being evaluated that may influence their technical operations. When each support specialist has completed work on his project, the Evaluation Coordinator should be sure that he understands what has taken place so that he can adequately explain it to the decision-maker to whom he reports the evaluation. His specific tasks are:

Maintaining frequent communication with and observation of the project director and participants

Interpreting the decision-making process as it operates in the project to be evaluated

Identifying the decision-makers and the decision situations to be served

Clarifying the project objectives, if necessary, and defining criteria and measurement techniques for each decision situation

Coordinating the scheduling and administering of data collection instruments to project participants

Defining the project systematically

Providing feedback of evaluation information to project participants as well as information for interpreting and utilizing it

Obtaining the decision-makers' reactions to evaluation reports

Using the services of the support specialists in the evaluation unit whenever necessary.

**Instrument Specialist - Kenneth Andrews**

The Instrument Specialist has general responsibility for selecting and developing tests and other instruments to be used in evaluations. His specific tasks are:

Selecting available instruments when appropriate to the needs of a given project

Analyzing the strengths and weaknesses of any instrument

Developing test plans

Writing, or supervising the writing of, acceptable items for instruments
Pilot testing new instruments

Making appropriate validity and reliability checks on instruments

Revising instruments and preparing directions for administering and scoring the instruments

Performing research related to new measurement techniques

Maintaining current information on newly developed instruments.

Data Collection Specialist - Raymond Harper

The Data Collection Specialist has technical knowledge regarding data collection techniques as well as supervisory skill in selecting, training and supervising para-professionals who actually gather the data. In some cases the Evaluation Coordinator may assist by actually conducting a few interviews or observations scheduled by the Collection Specialists. Tasks included are:

- Interpreting information needs observed by the Evaluation Coordinator as they affect the data collection process
- Determining from the Evaluation Coordinator existing and potential sources of information
- Specifying instruments and methods to be used in conjunction with the Instrument Specialist
- Selecting sampling procedures
- Specifying the conditions and the schedule for information collection
- Determining the qualifications and training needs of personnel to collect the data
- Employing and training personnel to collect the data or contracting out for this service
- Coordinating with the data processing specialist in determining a format for coding information
- Performing research related to new sampling and data collection techniques.

Data Processing Specialist - Arthur Cummings

The Data Processing Specialist has competence in statistical analysis, computer operations and information management. He also has
explaining these technical tasks to other evaluators and educators in
terms they will understand. Like the Data Collection Specialist, the
Data Processing Specialist has supervisory skill in selecting, training
and supervising para-professionals who are to key-punch, score tests and
perform routine computations. A job description for this role includes:

Providing a format for coding information collected

Scoring and providing item analysis for instruments

Providing for data storage, management and retrieval

Coordinating data processing activities with other units
within and outside the agency

Maintaining current information on new and existing computer
programs and other data processing systems

Explaining, when necessary, computer operations and outputs
to other evaluators and educators

Writing basic and intermediate level computer programs

Coordinating the writing of more complicated programs with
an experienced programmer

Selecting the analytical procedures and designating a means
for performing the analysis

Interpreting the results in terms of given criteria.

Field Service Specialists - (Staff of 10 - Carl Denver, Larry Gilbert,
Sam Cooper, Susan Leonard, David Smithers,
Mary Hart, Bob Reynolds, Dennis Shelton,
Daniel Walters and Jim Lord)

The Specialist in Field Services is responsible for implementing
evaluation activities and maintaining sound working relationships with
members of the professional staff for the purpose of gathering evaluation
information. He shall be responsible to the Assistant Superintendent for
Evaluation and other personnel assigned to design and coordinate evalu-
aton activities as needed. A job description of this role includes:

1. Information collection

   a. Making arrangements with persons who will provide
evaluation information for working with the evaluation department

   b. Collecting data as specified in evaluation designs
2. Information organization and analysis

a. Scoring instruments and evaluation information collection devices

b. Coding data in a form useful for information analysis

c. Using analytical techniques and available hand and machine data processing devices to analyze evaluation information

d. Providing for data storage, management, and retrieval for use in other evaluation activities

e. Producing documentation for computations made in evaluation activities.

3. Report preparation

a. Working cooperatively with other evaluation personnel to restructure evaluation data into suitable report formats

b. Reviewing evaluation reports for editorial quality and technical soundness in accord with report preparation procedures and the guidelines established by the evaluation department

c. Preparing drafts, charts, and tables to illustrate evaluation reports

d. Working with evaluation personnel and other administrators to obtain the clients' reactions to evaluation information provided, in order to make information analysis and reporting more effective.

4. Clarification and security of evaluation information

a. Maintaining a file of evaluation information useful in the evaluation activities

b. Establishing procedures for insuring security of evaluation information and data.
Superintendent: Dr. Paul R. Sure

His name symbolizes the pressure (P. R. Sure) the top decision-maker of a school corporation operating in the field today finds himself working under. Dr. Sure is a man in his early forties who has been with the In-Ur Community School Corporation for ten years.

Assistant Superintendent for Curriculum: Loal Heritage

Mr. Heritage assumed his present position by virtue of having served in most of the "chairs" of the system (i.e., elementary teacher, junior high principal, assistant senior high principal, and social science coordinator for system). Added to his forty-one years of service with the system is a childhood that was spent in the In-Ur Community. The comments made in his speech are intended to reflect the timely concerns of the corporation, but the subtleties behind the comments are a longing for the past and the traditions that are rooted in that past. Loal Heritage's (local heritage) name was chosen to fit the image of those in our present systems who envision retirement in a few years and see change as a threat to the job requirements of their present position.

In-Ur Federation of Teachers' President: Conrad Tract

Mr. Tract is thirty-one years old and has been with the Corporation for eight years. He has served in various capacities with the Union in their efforts of negotiation with the board of education (i.e., building representative, member of salary committee, delegate for negotiatory meetings with board). His election last year as president of the Union has led to a personal pride and deep commitment to the new contract.
Conrad Tract (con-tract) may, through his speech, bring out the fears of many administrators regarding teacher unions. The time allowed for emphasizing salaries, fringe benefits, grievance procedures, etc., within the speech is an attempt to familiarize "game players" with timely "tunes" and yet go a step farther in what the image of a "professional educator" must be striving for. Tract attempts to legitimate what his Union is doing for students through his comments on newly formed committees designed to improve the relationship between various high school student bodies in the corporation. Tract's dress and style were designed to challenge the attitudes and biases of "game players" and stereotypes of union representatives in general.

State House of Representatives Member: Getmore E. Voteski

Mr. Getmore E. Voteski (get-more-election votes) is a politician who has lived in In-Ur most all his life (excluding four years in military service). His education (including two years of college) took place in the local public schools and university. A man in his middle forties, Voteski, has been in local and state politics, on-and-off again, over a period of fifteen years. The last three years have been spent in the state house of representatives. His present political ambition is to become Speaker of the House. He can envision the possibility of this happening if he can come up with a creative program designed to meet the needs of a large segment of the state's population, as well as keeping a close account of state money to be used in the program (House Bill 204). Voteski has served as the state's party leader for four years prior to his election to the House.
Representative of the Evalapattah Community Board: Dr. S. C. Linkage

Dr. S. C. Linkage (school-community linkage) is a thirty-two year old professor from the local university. He is associated with the student teaching program in the college of education at the university. Linkage's image is meant to portray a willingness by university personnel to become involved in school community affairs, while lacking a general knowledge of the most diplomatic and meaningful method of approaching the situation.

President of the In-Ur Education Coalition: Reverend Carl Douglas

Reverend Douglas is a black man of twenty-eight years of age. He attempts to represent a point of view that would include whites and blacks working together in civil movements. Douglas knows from experience what the black man needs to "make-it" in American society and brings this out in his speech (status and power). He is attempting to legitimate his claims for the black man by working in an inter-racial organization (Urban Education Coalition) and speaking of its merits before an influential white group (school board).

President of the Association of In-Ur Area Companies: Manuel Vocruz

Mr. Vocruz is a Mexican-American in his early forties. He serves as Personnel Director for Autolite Sparkplug Division of General Motors located in the city. Manuel Vocruz (manuel-vocational) would like to see the school corporation align itself more closely with the needs of industry in the area. For example, he would desire a "community school concept" whereby the hours of the school day would be lengthened and classes designed for teaching particular industrial and business skills. His general attitude of vocational programs in In-Ur's Schools is one of
superficial innovation, therefore extremely inadequate for meeting the community industries' rapidly changing needs.
APPENDIX F

EVALUATION REPORT: MINI-FIELD TEST
EVALUATION REPORT:

OBSERVER'S RATING OF PARTICIPANTS IN SIMULATION

NOTE: Refer to back sheet for more specific comments

Tasks 1 and 2

Time = 9:00 to 12:00 Majority of group = IACP personnel

Number = 8

<table>
<thead>
<tr>
<th>Question</th>
<th>Generally Yes</th>
<th>Inconclusive</th>
<th>Generally No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Did the participants feel that they were sufficiently involved with the expected tasks?</td>
<td>5</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2. Did the participants attempt to accomplish their assigned task?</td>
<td>5</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>3. Did the participants believe they actually accomplished something during these tasks?</td>
<td>2</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>favored the second task (5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Did the participants feel they needed more structure for the tasks?</td>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>5. Did the participants feel they needed more guidance or help from the staff in the tasks?</td>
<td>1</td>
<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>
This evaluation only takes into consideration tasks one (1) and two (2). Talked to eight participants in relation to questions asked on questionnaire.

Results of questionnaire and interviews:

Ques. #2. Five out of eight individuals felt they were sufficiently involved in each of the tasks. One comment—groups too large for all to actively participate.

Ques. #3. Five out of the eight participants attempted to accomplish their assigned tasks. Rationale for this response was based on the fact that three of these people had nothing to say throughout the two tasks. However, I noticed in task three that one of these individuals presented the final report for the group.

Ques. #4. Three participants felt they actually accomplished something during the two tasks.

Accomplished defined: were able to relate task to theory of CIPP, felt they gave an adequate presentation, felt comfortable with arriving at their answers.

Two participants felt neutral on the subject—i.e., they really did not know how much they really accomplished. Also they felt they had to go away and think about what went on before really giving a better answer than this.

A total of four (4) people made these same comments:
a. With the first task I was really in the dark, but task two really gave me the direction I was looking for.
b. Too much material presented in task one. I had to assimilate too much.

Ques. #5. Four (4) people felt that they did NOT need more structure via materials to accomplish their tasks. The materials used nicely structured what had to be done.

Two (2) people felt that more structure to accomplish the task should have been provided by the materials.

Ques. #6. Two participants felt that enough guidance or help was given by the staff, (i.e., Dr. Hammond, Gary, and the Secretaries), in order for them to adequately accomplish their tasks.

One participant was neutral on the subject.
Three participants felt they needed or could have used more help from the staff.

Specific comments included:

1. Need more than just a secretary—Need a person who has a feel for the community and other relevant issues.

2. Secretary, in some cases, "spoon feed the participants"—must watch for this, otherwise evaluating secretaries' accomplishments and not the participants.

3. Need a "red flag" to appear when going down the wrong road.
1. Need more table space.

2. What is the ideal number of people per group? My suggestion: 5-7.

3. Abilities of secretaries—what boundaries do they operate in, i.e., how much, over and above disseminating materials, do they relate to participants. With today's groups, the abilities of the secretaries varied. Must be careful here. If not, we will be evaluating a secretary's performance rather than the group's. Secretaries and/or other personnel who may play this role, I feel should stay in certain boundaries in order that a more valid assessment can be made of the groups under consideration.

4. Amount of time too short to really accomplish Task One or to really think through it in any detail. What we must consider here is the fact that for many participants this may very well be their first exposure to simulation. Also, there is always a time lag to get adjusted to any simulation. After Task One, the hypothetical graph makes a swift downward descent in terms of how the group knows HOW TO PLAY THE GAME. Therefore, tasks after the first one should not require time spent on adjustment to a foreign situation, or learning the rules on HOW TO PLAY THE GAME.

5. Follow up discussion for each task could be more pointed and related to the theory the simulation is trying to uncover. Entertain more concerns from the group of participants and try and reach some closure on each and every task.

6. Watch other administration concerns. For example, make sure all files have the right and enough materials. This cannot be checked too carefully. Make sure each group knows what is expected of them—How do you want them to report? Who shall report?

7. Keep idea in mind that we (staff) are as much interested in process you (the group) went through to arrive at your responses, as well as the responses themselves. We are trying to get concepts across via simulation. Not trying to figure out right answers. There may be many. We do not have the right answers. However, we feel comfortable with these and can defend them. Will you be able to do the same with your response? Group should keep in mind, at all times, "How does what you are doing relate to CIPP?"
APPENDIX G

SIMULATION OPINIONNAIRE FORM
SIMULATION OPINIONNAIRE

I. Identification

Please check (V) the position and agency you represent according to your primary responsibility.

Position:
____ Administrator
____ Methodologist
____ Evaluator

Agency:
____ Federal
____ State
____ Local
____ Research and Development
____ College of Education

II. Purpose

The data generated by responses from the opinionnaire will be used to assess opinions of participants toward specific aspects of the simulation game.

III. Directions

Please indicate your agreement or disagreement with each statement by checking (V) the space that best describes your reaction. Although several of the statements may appear similar, please judge each one on an individual basis. Since we need to know your opinion, please answer each question frankly and honestly. If you feel a need to justify a response, use the space below each statement to do so. Please respond to every statement.

IV. Statements

1. The objective of becoming familiar with the theory of evaluation presented in the Phi Delta Kappa monograph through a simulation game was accomplished.

   ( ) Strongly Disagree
   ( ) Disagree
   ( ) Undecided
   ( ) Agree
   ( ) Strongly Agree

2. The purpose of relating a simulation game to a real life school situation was accomplished.

   ( ) Strongly Disagree
   ( ) Disagree
   ( ) Undecided
   ( ) Agree
   ( ) Strongly Agree

188
3. The characterizations used in the audio visual presentation were easy to identify with in terms of my past experiences with school systems.

( ) ( ) ( ) ( ) ( )
Strongly Disagree Undecided Agree Strongly Disagree
or Neutral Agree

4. The purpose of using audio-visual materials to make the simulation game more like a real life school situation was accomplished.

( ) ( ) ( ) ( ) ( )
Strongly Disagree Undecided Agree Strongly Disagree
or Neutral Agree

5. References to problems relating to reading achievement throughout the school corporation were made evident in the speeches.

( ) ( ) ( ) ( ) ( )
Strongly Disagree Undecided Agree Strongly Disagree
or Neutral Agree

6. The content of the speeches was helpful in identifying with the simulated school corporation.

( ) ( ) ( ) ( ) ( )
Strongly Disagree Undecided Agree Strongly Disagree
or Neutral Agree

7. Information presented in the speeches closely follows the topics currently being discussed and associated with large urban school systems.

( ) ( ) ( ) ( ) ( )
Strongly Disagree Undecided Agree Strongly Disagree
or Neutral Agree

8. The person who played the part of the characterized secretary, Innes T'Know, was enthusiastic about the role he or she played in the game.

( ) ( ) ( ) ( ) ( )
Strongly Disagree Undecided Agree Strongly Disagree
or Neutral Agree
9. The secretary was knowledgeable about the information on file.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

10. The secretary moved the game along by offering advice when my group lacked necessary background materials for performing a particular task.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

11. Memos were clearly stated as to the tasks required to be performed by me, the evaluator.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

12. Materials in the file concerning past data on elementary reading programs in the entire school corporation were sufficient.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

13. Materials in the file concerning past data on elementary reading programs between attendance districts of the school corporation were helpful.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

14. Materials in the file concerning past data on elementary reading programs were realistic in terms of program descriptions.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>
15. The time allotted to perform the task of developing a strategy for obtaining information relative to the cause of the reading problem was adequate. (Task 1)

Strongly Disagree Undecided Agree Strongly
Disagree or Neutral Agree

16. The information available for developing a context evaluation design for uncovering basic causes of the reading problem was helpful in completing Task 1.

Strongly Disagree Undecided Agree Strongly
Disagree or Neutral Agree

17. The simulated response to Task 1 was realistic in terms of the information made available.

Strongly Disagree Undecided Agree Strongly
Disagree or Neutral Agree

18. Progress reports were helpful in updating information as to decisions made in the time intervals between actual task performances.

Strongly Disagree Undecided Agree Strongly
Disagree or Neutral Agree

19. Materials in the file available for assessing alternative strategies from different value positions in order to solve the reading problem were sufficient. (Task 2)

Strongly Disagree Undecided Agree Strongly
Disagree or Neutral Agree
20. The time allotted to perform the task of developing a strategy for determining the best alternative from those presented in Task 2 was adequate.

( ) ( ) ( ) ( ) ( )
Strongly Disagree Undecided Agree Strongly
Disagree or Neutral Agree

21. The time allotted to perform the task of identifying and assessing potential barriers that might be built into the process evaluation plan was adequate. (Task 3)

( ) ( ) ( ) ( ) ( )
Strongly Disagree Undecided Agree Strongly
Disagree or Neutral Agree

22. The telephone call from the superintendent to the evaluator, Dr. Lave, added a realistic work priority dimension to the simulation game.

( ) ( ) ( ) ( ) ( )
Strongly Disagree Undecided Agree Strongly
Disagree or Neutral Agree

23. The application of the CIPP Evaluation Model to House Bill 204 provided a challenging short-term exercise for my knowledges and skills as an evaluator.

( ) ( ) ( ) ( ) ( )
Strongly Disagree Undecided Agree Strongly
Disagree or Neutral Agree

24. The simulated response for applying the CIPP Evaluation Model to House Bill 204 was realistic in terms of the theory and information made available.

( ) ( ) ( ) ( ) ( )
Strongly Disagree Undecided Agree Strongly
Disagree or Neutral Agree
25. The time allotted to perform the exercise of applying the CIPP Evaluation Model to House Bill 20H was adequate.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>( )</td>
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</table>

26. The time allotted to update the product evaluation design involving past and future reading programs was adequate. (Task 4)

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
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</thead>
<tbody>
<tr>
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</table>

27. The simulated response to Task 4 was realistic in terms of the information made available.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>( )</td>
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<td>( )</td>
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</tbody>
</table>

28. Materials in the file available for making a simple and clearly stated progress report to the Board in reference to reading program objectives were sufficient. (Task 5)

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>( )</td>
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<td>( )</td>
</tr>
</tbody>
</table>

29. The simulated response to Task 5 was realistic in terms of the information made available.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>( )</td>
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<td>( )</td>
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</tbody>
</table>

30. The time allotted to developing a report providing information relative to the outcome of the objectives established for students and teachers in the reading improvement program was adequate.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>( )</td>
<td>( )</td>
<td>( )</td>
<td>( )</td>
</tr>
</tbody>
</table>
31. The final simulated recommendation that the in-service teacher training be extended from grades 4 through 6 in order to continue to improve student reading achievement throughout the school corporation was an excellent conclusion for the simulation game.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>or Neutral</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

32. The simulated responses made by the simulation authors after Tasks 1, 4, 5, and the supplementary exercise was adequate as a feedback device.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>or Neutral</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

33. The numerical size of the evaluation team seated at my table allowed for adequate participation on my part in the problem-solving tasks of the simulation game.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>or Neutral</td>
<td></td>
<td></td>
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</tbody>
</table>

34. The composition of the evaluation team in terms of theoreticians and/or practitioners seated at my table was helpful in developing strategies for performing tasks in the simulation game.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>or Neutral</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

35. The physical arrangement of the room was adequate for my fullest participation in the simulation game.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree</td>
<td>or Neutral</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
V. Additional Comments

If you have any suggestions for improving either the simulation game and/or the simulation opinionnaire, please use the space provided below for your comments.

Simulation game:

Simulation opinionnaire:
APPENDIX H

TIME SCHEDULE AND AGENDA FOR FIELD TESTING SIMULATION
**GENERAL:** Please make notes or comments that may be helpful for future changes in the simulation.

<table>
<thead>
<tr>
<th>Time</th>
<th>Simulated Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:30</td>
<td>May 4, 1970</td>
</tr>
</tbody>
</table>

**Monday, June 22, 1970**

<table>
<thead>
<tr>
<th>Time</th>
<th>Simulated Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:30</td>
<td>May 4, 1970</td>
</tr>
</tbody>
</table>

I. Introduction and overview of simulation game (Hand out Time Table and Description of Roles)

II. Opening letter from Superintendent

  Place opening letter on table in front of each participant. (Will allow approximately 2 minutes to read the letter.)
  (We may alter time by shortening Introduction. If this happens, modify Time Table accordingly.)

III. Meeting in Superintendent's Office

IV. Evaluator's Office (5 minutes only)

  1. Introduce secretary (Innes T'Know)
  2. Describe role of secretary
     a. Requests for information from file
     b. Keep evaluator (Mr. Lave) aware of important meetings and deadlines for reports
     c. Help interpret memos if necessary
  3. At the end of approximately 4 minutes, secretary remind Mr. Lave of Orientation meeting
V. Orientation Meeting

VI. Evaluator's Office

   1. Hand out any information requested at this time

   2. At the end of approximately 4 minutes, secretary remind Mr. Lave of Board meeting at 2:45

VII. Board Meeting

VIII. Coffee

IX. Evaluator's Office--Task 1

   1. Hand out memorandum from Superintendent

   2. Hand out notebook and remind participants of the importance of the context evaluation report

   3. Hand out information from the files as requested

X. End Task 1--Group Reports and Discussion

   1. When directed to do so by the simulation chairman, hand out discussion packages for Task 1

   2. File team task reports in folder provided
XI.  End Discussion and Reporting

Time 5:15

XII. Dinner

5:15

Prior to the beginning of Task 2 at 7:00, secretaries will place in front of each participant the context evaluation material not called for in Task 1

XIII. Evaluator's Office--Task 2

7:00* Jan. 7, 1971

Hand out Task 2 memorandum

XIV. End Task 2--Group Reports and Discussion

7:45 Jan. 29, 1971

1. When directed to do so by the simulation chairman, hand out discussion packages for Task 2

2. File team task reports in folder provided

XV. Evaluator's Office--Task 3

8:45 Feb. 23, 1971

Hand out Task 3 memorandum

XVI. End Task 3

9:30 March 2, 1971

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Tuesday, June 23, 1970

XVII. Group Reports and Discussion

8:30

1. When directed to do so by the simulation chairman, hand out discussion packages for Task 3

2. File team task reports in folder provided
XVIII. Evaluator's Office--Task 4
Hand out Task 4 memorandum  9:30  Dec. 7, 1971

XIX. Supplementary Task--telephone call from Superintendent (If your team fails to understand the task, give them as much explanation as necessary.)  9:35  Dec. 8, 1971

XX. Finish Supplementary Task  10:00  Dec. 10, 1971

XXI. Coffee  10:00-10:15

XXII. End Task 4--Group Reports and Discussion  11:00  Dec. 21, 1971
  1. When directed to do so by the simulation chairman, hand out discussion packages for Task 4
  2. File team task reports (both supplementary and Task 4) in folders provided

XXIII. End Reporting and Discussion  12:00

XXIV. Lunch  12:00-1:30

XXV. Evaluator's Office--Task 5
Hand out Task 5 memorandum  1:30  May 28, 1972
XXVI. End Task 5—Group Reports and Discussion 2:15

1. When directed to do so by the simulation chairman, hand out discussion packages for Task 5

2. When directed to do by the simulation chairman, hand out decision-making chart and objectives

3. File team reports in folder provided

XXVII. End Reporting and Discussion 3:15

XXVIII. Coffee 3:15-

3:30

XXIX. Evaluation of Simulation Experience 3:30

XXX. Discussion and Recommendations for Simulation 4:30

XXXI. End Simulation 5:00
APPENDIX I

PARTICIPANT STATEMENTS RELATED TO SIMULATION FIELD TRIALS
(SYMPOSIUM AND NEW HAMPSHIRE)
I. General Data Information

The following participant statements are a result of data collected at the Phi Delta Kappa Symposium and New Hampshire Institute on Educational Evaluation and Decision Making. The written statements, from the opinionnaire, were sequenced according to their relationship to the guidelines presented in Chapter III.

II. Number Responding to Opinionnaire

The total number of participants responding to the opinionnaire at the Phi Delta Kappa Symposium was 52 of a possible 58 participants (90 per cent return). The total number of participants in the game and responding to the opinionnaire at New Hampshire was 26 (100 per cent return).

III. Code Description

Site

Phi Delta Kappa - PDK
New Hampshire - NH

Participants

Administrators - A
Evaluators - E
Methodologists - M

Agencies

Federal - F
State - S
Research and Development - RD
College of Education - CE
Local - L
A. To become familiar with the theory of evaluation through a simulation game.

ADMINISTRATORS (PDK):

(CE) Vocabulary and concepts of the CIPP Model are sophisticated. One reading of the book, one overview at beginning of session are not sufficient time to assimilate them for use in practice. It would have been helpful to follow chart p. 150 in the PDK Monograph (the relationship between the chart and the tasks was not apparent until end of game when it was announced), for directors, print it on tasks and print definitions of key words involved in the tasks. There was not time to refer to the book glossary and also complete the tasks. Without a thorough knowledge of CIPP it was like teaching without knowing the content.

(RD) Generally a fine piece of work. I felt that I had an adequate grasp of the theory and concepts.

(S) Game is quite adequate for the purpose of becoming familiar with CIPP. However, it does not provide appropriate opportunity to explore, become familiar with, or discuss the PDK book.

(CE) Somehow it failed to deepen my understanding of the PDK book--consequently I'm disappointed.

(L) Better orientation. Be more exact about the exact model you are expected to use and that the responses you get (feedback like memos, etc.) are based on this model. More direction is needed if this is to be a real teaching device as well as learning.

EVALUATORS (PDK):

(S) I must compliment the staff on the effectiveness which the simulation game brings to bear on evaluation. Would like to pursue it further with some capability of further use of alternatives or branching.

(S) More adequate advance preparation in CIPP.

(RD) The events as they develop should be tied to the theory from time to time. I feel that it would have been helpful to locate the project on the flow chart from time to time.

(CE) My two major criticisms were a lack of congruence between the model and simulation activities in terms of using the model to solve the tasks and the lack of clear and continuous feedback on task solutions ....
METHODOLOGISTS (PDK):

(CE) A simpler problem as an initial exposure to the application of the CIPP should be considered; i.e., some practice and success with CIPP before undertaking the complex problem of IN-UR. There were many opportunities to exploit CIPP which were overlooked, bypassed, etc.

(L) I've learned much and am much more aware of the evaluation process and value to education. My interest has been sharpened and now I am anxious to study more thoroughly the entire process. Thanks for the opportunity.

EVALUATORS (NH):

(S) The game made a valuable contribution to my understanding of the CIPP Model.

(S) The process of relating tasks to the cells of the "Chart for Relating Evaluation to Decision-Making" needs refinement.

B. To focus the simulation experience on a common real life educational setting for the purpose of involving participants in the game.

ADMINISTRATORS (PDK):

(CE) Some superintendents did not enjoy the image of the fuddy-duddy superintendent or the intense emphasis on a very traditional school system in which the solution to problems is conservative and unworkable. Real issues of . . . . Do we promote before child has learned all the vocabulary of grade 1? Problems such as these would have made decisions in the simulation game more relevant.

(RD) Less time on interesting, but unessential, context background (i.e., personalities of union representative and assistant superintendent for curriculum).

(L) Omit references to Ohio or terms unique to Ohio only. Board meeting room, etc. would not be typical of a big city system setting--strictly rural. Your visual on the board meeting does not have the superintendent in the correct role. He is assuming the role of the board president.

(S) I personally would prefer some problem other than a reading problem. I have a "thing" because so much money in our state has been spent on inadequate reading programs.
EVALUATORS (PDK):

(L) . . . could make more use of C. Smith for continuity; could increase interaction of Board and Administrator and Evaluator by memo and A.V.

G. To assure the on-going nature of the game by using a live characterization.

METHODOLOGISTS (PDK):

(CE) Also, much time was wasted in my group in rather aimless contributions, with little leadership in focusing on points involved. More careful preparation of leaders needed.

D. To assure the on-going nature of the game by using printed information that is applicable to evaluation theory.

METHODOLOGISTS (PDK):

(CE) We were not able to digest all information provided from the files. Most was not utilized. Task 1 assumed previous experience with simulation techniques.

(F) The process of obtaining background information prior to Task 1 was extremely chaotic and time-consuming. Could this information be presented in a more coherent format—a briefing folder, etc.? The progress reports (objectives and appended reports) were cumbersome because of flipping back and forth between objectives, steps, and reports. One suggestion—packets of information could be color cued according to the tasks to which they pertain. This would facilitate filing, sorting out information, etc.

(CE) If tasks are to be complete only on basis of materials in kit, this should be clearly stated.

ADMINISTRATORS (NH):

(S) Have more relationship between the data provided and the initial decisions; also give more explicit data for '70-'71.

(RD) More information.
(CE) Maybe you could impress upon the next group the necessity of reading the memos—"develop a plan for . . ." Sometimes our group read too much into the statements.

(CE) There should be a bit more clarity expressed in the memos to enable persons making the evaluation able to attain reliable and relative information to the desires of the administration.

E. To allow adequate time to complete each task.

ADMINISTRATORS (PDK):

(L) Adjust time constraints to the size of the task.

(L) Color code information sheets or number them. Task 1 requires more time to assimilate information.

(L) Should be shortened considerably.

(S) The last half of the game seemed to drag a small amount! It might be speeded up and/or more tasks provided. Our group had time to waste.

EVALUATORS (PDK):

(S) More time.

(L) Task 1 too much overload.

(S) Move faster through tasks.

METHODOLOGISTS (PDK):

(L) More time for Tasks 1 and 2. Four choices of Task 2 was disturbing. Time lost on discussion of other alternatives. Directions could have been clearer.

(CE) Shorten by 2-3 hours. If possible on the schedule, over within day 10:00-12:15--1:00-4:30. NO NIGHT sessions, please!

EVALUATORS (NH):

(S) The only suggestion that I might make is that in the future, more than 5 of the 10 days be devoted to the game—perhaps 7 of 10 days.
(S) Good learning device, just about long enough.

METHODOLOGISTS (NH):

(CE) The game itself was an enjoyable learning experience. However, it was too long. A three day experience is probably the maximum to maintain interest and enthusiasm.

F. To allow participants to design a report ( simulated response) for all tasks and the supplemental exercise that utilizes specific components of evaluation theory as they relate to the available simulated information.

ADMINISTRATORS (PDK):

(L) I was struck by the lack of similarity among the various responses to the tasks leading to the possibility that the CIPP Model may either be too little understood or inadequate as a theoretical framework for arriving at logical and generally agreed upon decisions.

(CE) The game should have been played fully; i.e., the reporter should have reported, rather than tell how he would report. For example, he should have developed a memo to Superintendent Sure rather than tell what the memo to the superintendent would contain. With more time, sampling decisions could have been made and instruments developed.

EVALUATORS (PDK):

(L) Problem between input and process evaluation where plan was being developed--no evidence of evaluation concurrently with development--except evaluator on committee.

METHODOLOGISTS (PDK):

(CE) Break Task 1 into two parts by providing feedback (Steps 1 and 2 of the response) after about 30 minutes, then picking up again with the remainder of Task 1. Don't ask for group responses to first part. (This change should help to get participants involved in the role-playing aspect of the simulation more quickly and effectively).
G. To provide a detailed general report after Tasks 1, 4, 5, and the supplemental exercise that would enable the participants to self-evaluate their own report.

ADMINISTRATORS (PDK):

(CE) Force individual to respond. Force teams to live with consequency decisions (recommendations).

EVALUATORS (PDK):

(S) More meaningful interaction of decision-maker and evaluator. Feedback more responsive to separate group products.

() After each task and discussion have instructor review and elaborate on concept, skill and procedure, task, etc., just under use. Have follow-up simulation on more technical and specific level and include actual types of persons that evaluator could have interface with.

(S) Provide a reward system.

(S) If you expect to be able to predict outcomes, then you had best provide sufficient cues to insure those outcomes. Establish or change gaming strategies--on (1) learning elements of model (language, concepts, etc.), (2) application of the model.

METHODOLOGISTS (NH):

(CE) You should attempt to develop some probing, though not threatening, questions which should follow the completion of each task. The questions can be posed by the panel or the individual groups could consult these questions at the completion of each task.

H. To challenge the knowledges and skill of the participants as evaluators in a short summation exercise.

NO STATEMENTS

I. To assure adequate participation and a diverse input of administrative, evaluative, and methodological skills by assigning individuals to groups.
ADMINISTRATORS (PDK):  

(F) I was bothered by the waste of time in getting a consensus from the group to use as an individual action. Could this game be structured so that it could be done individually?

(CE) Rotate members of groups so you get to know more people and more ways of thinking.

(L) We should have re-grouped for each session to provide greater opportunities for interaction with other participants.

EVALUATORS (PDK):

(CE) . . . In addition, instructions on what was required of the team were poorly presented and the heterogeneity of the group resulted in one or two people "carrying" it.

METHODOLOGISTS (PDK):

(CE) Restructure so that I am not simulating the role of an evaluator, but am instead simulating a role as a member of a professional evaluation team. The memos came to me and anticipated a private operation while in reality I worked as a subordinate in a team.

J. To provide adequate physical arrangements for the simulation to take place.

ADMINISTRATORS (PDK):

NO STATEMENTS

EVALUATORS (PDK):

( ) More workspace.

K. Miscellaneous statements

METHODOLOGISTS (PDK):

(RD) The game itself seems to be in pretty good shape--the first section of this symposium was not particularly complimentary to the game. The game is much more valuable than the Session #1.
Input evaluation should be based on the 3 established criteria. In addition, the decision rule should be referred to in selecting the particular input. Broader program descriptions (the 4 suggested alternatives) are needed before the input evaluation phase. I believe a set of simulation game rules would be useful in helping to keep some of the game players on the track. Some of the participants wanted to reject decisions they had made one page earlier.

Principals should be involved more in decision-making. Teachers should be involved more in decision-making. More diagnostic tests should be used to help individual pupils and groups of pupils.

The superintendents are too much involved in politics rather than being experts in educational philosophy. The publishers and test makers are wielding too much influence in educational policy.

The speeches Monday morning prior to the simulation had little reference to the main task of the conference.

Remind participants at beginning of Task 2 that they are playing the role of an evaluator and are not to act like decision-makers in working on the second task. Eliminate the use of the past tense in Report 8: April 15/May 3/July 1. Since memo antedates this point, it tends to confuse participants. (Alternatively, date memo later--e.g., early May--with some revisions.). Instructor should publicly announce time remaining 5 minutes before completion of each exercise to give groups a chance to wrap-up their work.

Evaluators (NH):

The simulation game was a well-planned and interesting learning experience and should be implemented elsewhere for modification to further improve the game.

With very few exceptions in specific tasks, this simulation game was the most productive and enjoyable experience encountered so far in this institute. The game was well developed and most appropriate.
APPENDIX J

WRITTEN STATEMENTS ASSESSING THE SIMULATION OPINIONNAIRE
WRITTEN STATEMENTS
ASSESSING OPINIONNAIRE

I. General Information

The written statements which follow were made by simulation participants at the Phi Delta Kappa Symposium and New Hampshire Institute on Educational Evaluation and Decision Making. The statements are categorized by respondent's position:

1. Administrator
2. Evaluator
3. Methodologist

II. Applicable Opinionnaire Statement

Participant responses were cued by a statement on the opinionnaire which stated:

"If you have any suggestions for improving . . . the simulation opinionnaire, please use the space provided . . . for your comments."
ADMINISTRATORS:

Redundant with other measures.

The opinionnaire, as the other materials, demonstrates commendable preparation and effective planning. The general format and content of the simulation have been superior to that usually prepared by non-commercial sources.

Presented too much after the fact.

Too long!

EVALUATORS:

Asked some questions more than once (may be statistically necessary, but takes time). Clarify task definitions or setting where referred to.

WOW

Shorten them.

Wish I could have been more helpful here.

Good coverage of content of game. Might want to do some observations and interviews to validate your findings.

METHODOLOGISTS:

Recall of Tasks 1-4 is difficult at this time--too much interference.

Too difficult to answer some of the questions without necessary reference to the tasks. Perhaps the questions could be worded to include more reference to the tasks--thus aiding faulty memories.
ADMINISTRATORS:

Divide it up. I can't remember back to Task 1 too clearly.

EVALUATORS:

Seems OK.

Not too sure about some of the specific task references.

METHODOLOGISTS:

A final report should comment on students you are teaching the simulation game. (General)

Very good and adequate.

Questions somewhat irrelevant to my concerns and attitudes and responses. Agreeing or disagreeing really don't seem to say what is important to me concerning this experience.
APPENDIX K

GROUP REPORTS FOLLOWING EACH SIMULATED TASK
Group Reports
Following Each Simulated Task

The following is a summarized report of the responses given by selected groups after each task, at the Phi Delta Kappa Symposium. An outline has been developed to facilitate the reading of the responses.
Task I

I. Group I
A. Following the model which fits with the evaluation definition we felt we would:
   1. eliminate the information needs then;
   2. specify decisions to be made,
   3. assess material available that relates to program definitions.
   4. define the reading program as it was, and
   5. work with information which provides us with the decision situations and levels.
B. Description of antecedents as:
   1. pressure groups (via speeches given at board meeting)
C. Organize other material as to:
   1. project reports
   2. summary of test scores
   3. community organizations (as well as a description of organization)
   4. description of attendance districts within In-Ur.
D. Formal statement on:
   1. the decision setting utilized in establishing criterion variables in our plan.
E. Method of locating the decision setting would be:
   1. to find a statement of decision rules.
   2. identify the available evidence that had been provided by the former assistant superintendent of evaluation.
F. Present this plan to the superintendent.

II. Group III
A. Establish problem validity by:
   1. comparison of Evalapattah attendance district with others
   2. comparison of Evalapattah attendance district to comparable attendance districts in other cities (measured performance norms)
   3. acquiring follow-up information on graduates within In-Ur.
B. Literature search to:
   1. note what "Reading Theory" denotes in terms of reasonable expectations for districts of (Evalapattah's) character
C. Expanding the "expectation notion" to:
   1. teaching staff, supervisory and administrative personnel, pupils, parents; business community, etc.
D. Hypothesis of causes of reading problem particularly regarding:
   1. quality of instruction
   2. time devoted to instruction
   3. teacher mobility within Evalapattah and other attendance districts
   4. Teacher profiles
E. Interests of evaluation staff (group) to pursue:
1. student capacity or potential
2. family mobility
3. pupil profiles (utilizing aptitude measures)
4. reading program and methodology used
5. validity of reading materials utilized
6. data on effectiveness of remediation programs preceding this point in time
7. more information about specialists employed in the attendance district (particularly the reading specialists)
   a. indications that in-service training may be useful.
8. community profile (factors of)
   a. economic
   b. family mobility
   c. racial compositions

III. Group V
A. Initial actions
1. asked secretary for:
   a. information about objectives of reading program.
   b. achievement and other test scores
   c. copies of reading tests (detailed descriptions of) -(Ed. not in files)
   d. description of reading program
      (1) only general descriptions available
   e. information about experimental programs in the junior high school
      (1) only general descriptions available
B. Design for superintendent
1. might include the entire school district or
2. might include 3 schools in
   a. Evalapattah, South, and Central attendance districts
   b. rationale: test results showed they had reading problems.
3. reading problem causes may not be the same in all schools,
   but may vary with attendance districts
4. concerned with teacher turn-over
   a. is it consistent in all schools
5. source of reading achievement problem
   a. real or artifactual problem created by norm reference data
   b. what skills are not being achieved
   c. community reports on problems (how real are they)
   d. additional specification of the objective skills not being attained by In-Ur's students
C. Success of context evaluation
1. provided some useful information in understanding the problem of the school district
D. Needs:
1. a thorough description of reading program requiring an input evaluation
2. a good description of the operation of the reading program requires process evaluation
3. data about: (product evaluation)
   a. nature of reading objectives being achieved
   b. extent to which they are being achieved
4. Questions of congruency between test scores and objectives need to be asked
   a. are the tests measuring the objectives or are they measuring other objectives which are not listed for the schools
   b. are objectives being measured congruent with the (reading) program

E. Problems:
1. Delineating the specificity of the design
   a. general design for superintendent
   b. specific term design for superintendent

IV. Group VII
A. Initial actions
1. review of context evaluation materials that was partially completed (predecessor's work)
2. elaboration on (introduction materials) at beginning.
B. Conducting review: (utilizing materials on file from preceding context evaluation report)
1. familiar with information available from departmental staff, and other groups
2. information from pressure groups on slides
3. conduct a special product evaluation to determine whether reading problem existed in the entire district or just Evalapattah and Central.
4. Identify possibilities where change could be brought about
   a. in-service teacher training possibility
   b. material distribution across schools
5. desire to involve curriculum groups as well as evaluation groups in design
6. desire to look at problems of disadvantaged groups on a national basis
   a. to get a feel for the problem in particular settings
   b. to obtain previous experimentation results
7. problem of reconstituting and reviewing the context evaluation design to:
   a. spell out specifically the cells in "Behavioral Population Variables" model offered in the attitudinal information
Task 2

I. Group X
A. Presentation of a plan to select strategies for the superintendent (Report #5)
   1. Recommend backtracking in order to select many more strategies and alternatives than the selected strategy represented.
   2. Not to reject the other causes of the problem that were detected on a previous memo.
   3. Look at other possible causes and solve them in the context of the schools involved.
      a. to set a mode for evaluating the next of the various solution alternatives
      b. for reasons of effective comparison throughout the school year.
   4. Careful differential diagnosis of teaching staff for selecting a training program on the basis of divisional criteria
      a. training
      b. experience
      c. reading background
   5. Operate in an experimental mode
      a. preparing (planning) as if the cause of the problem was not evident.
      b. preparing so as to tryout various solutions
         (1) options on solution selection would be done by expert opinion
   6. Polled members of group to get the expert opinion needed for recommendation to superintendent.

II. Group VIII
A. Opening comments:
   1. We noticed a couple of things before we started:
      a. Initial charge for "doing something" came from the superintendent
      b. "this" charge came from the assistant superintendent
      c. group didn't take any "issue" with lines of authority and communication, only noted it with interest.
   2. Comments on listing of alternatives:
      a. we (group) had a chance to contribute to the listing
      b. we worked with "specialists in the administration" in preparing the activities in the report above.
      c. conclusion: we could not re-suggest alternatives
      d. (role playing implications)
         (1) we knew of some additional alternatives that we tried to make in report and failed
         (2) we didn't know of any other alternatives because we are not reading specialists
         (3) we are "evaluation specialists" at this point.
(4) if we attempted to convince the "reading specialists" that there were other alternatives initially and failed at it—we still feel we could risk interpersonal relationships by reasserting those things we lost on the first time around.

e. taking the four alternatives:

(1) structured a grid
(2) labeled the rows of that grid with the four alternatives
(3) labeled the columns using criteria stated in report #5
(4) asked question, "What would be ways of generating the data which would be necessary to fill this grid?"
(5) answer: plan, first called for another question before reporting to assistant superintendent.
(6) question: "Do you really mean potential impact?"
   (a) under feasibility and accountability it sounds like a continuing program is asked for
(7) if "potential impact" is desired then: procedures for getting that tentative estimate in the change of teacher behavior and subsequent change in student performance can be accomplished by,
   (a) using tractability and feasibility criteria
(8) if sound information is needed to decide on a program which will be built into a permanent part of the system then we suggest:
   (a) decisions made among alternatives one, two and four.
   (b) data provided under criteria A (impact criterion) leaves us with no assurity to make a decision at this point in time. (no procedures for doing this now)
(9) ask decision-maker to clarify his wishes:
   (a) "Do you want potential impact?"
   (b) "Do you want an estimate of impact?"
   (c) "Do you want solid information about the impact in our school system?"
(10) if point (c) is desired then,
    (a) a trial must be run on alternatives
(11) if point (9a) is desired then,
    (a) procedures for generating have been listed (read written report)

III. Group VI
A. Initial action
   1. We defined the task (offered a frame of reference)
      a. previously established is that this was to be planned change in a 'neomobilistic' setting
b. time constraint was noted. (superintendent wants his response in two weeks)
c. "balance of power groups" indicates that teachers not understanding the program were rated lowest.
d. conclusion: You're asking them (teachers) to do something which they do not consider important
e. conclusion: It is not our position at this point to offer new strategies. The four had been determined and we would live by them.

B. Secondary action:
1. from frame of reference, preceded to employing an outside expert
2. expert to determine criteria listed to decide between the strategies
3. polled teachers for their opinion (P.R. action based on possibility of final decision causing controversy with teachers)
4. need information concerning possibilities for strategy implementation.

IV. Group 11
A. Initial action:
1. started with the assumption that these are the four alternatives
2. a decision was to be made on them by someone else
3. we should suggest how this should be done

B. Point of reference:
1. we wanted the superintendent and assistant superintendent and the committee to know that the alternatives, arrived at, were not congruent with the teachers perception of the problem.
2. value judgements on alternatives should come from the teachers
   a. they should have major input
   b. rating scale need be developed for teachers to respond to as a whole or a random sample.
   c. rationale: need some feeling of what they would like to do since they did not perceive this as a problem.
   d. involvement by teachers could be in making one of the four choices or by the committee using the (rating scale) data.

C. Secondary actions:
1. Committee should look at the possibility of operating two or more plans simultaneously (pilot alternative),
2. Expand the criteria by more detailed listings under each criteria to:
   a. judge feasibility
   b. cost
   c. university's ability to put a summer course together
Task 3

I. Group II
A. Initial problem:
   1. knew basically what a "process evaluation" was
   2. got it confused with "product evaluation" at times
   3. our plan (could be either of the two)
B. Initial action
   1. Set-up a procedure to monitor daily the teachers perceptions of the trainee procedures utilizing:
      a. television
      b. large groups
   2. using an "attitude questionnaire" we would feed that information to the staff daily to:
      a. monitor potential problems of teachers--may dislike training procedures, etc.
      b. note signs of rebellion and make changes.
   3. discussion leader should be told daily (by verbal or written form) of problems or issues coming out of discussion sessions--then he would collate (the information) and feed it to his staff.
   4. a time-table to be developed by a staff member for attainment of objectives under this monitoring.
   5. (process efforts must be in coordination with the product evaluation because:
      a. the key to "process" is people attaining goals in some regular step fashion.
      b. otherwise: we can't build to a crescendo on the last day and everybody learn everything.
   6. provide for a simple "time-space" equipment for monitoring
      a. log of events that things happened as planned--on time and where they are supposed to--
      b. keeping people and equipment (used) as planned in a simple log.

II. Group IV
A. Initial action:
   1. We need money placed in the budget for the evaluation of this project (in-service program) -- assures its ongoing nature.
   2. We would monitor each school by using stratified random sampling (applied) to the process and content (of program) a. process would be examined in terms of the time factor b. content in terms of interviews
   3. Objectives (would be measured) in terms of the teachers a. what are they getting out of it? b. are they accomplishing the (initial) goals set up?
   4. We would use the committee that originally set up the workshop to help develop alternatives: a. for process evaluation b. content evaluation
5. We want the committee to build into their plan "an index of satisfaction," using a scale of one to five.
   a. If the index read less than 3 this would indicate to
      the superintendent that he could plug in numerable
      alternatives
         (1) 3 hours of T.V. time for 14 days (a concern of
              Sure's)
         (2) we would package a number of alternatives for him.

III. Group III
   A. Initial action:
      1. to organize a group (team) of observers and recorders,
         probably from the staff (evaluation)--(monitor the program)
      2. we would enhance our budget--we thought this should have
         been explicit in the problem.
      3. we would try to capture the judgements of the partici-
         pants and
            a. sensed this was a sampling problem.
      4. we recognized that some product evaluation was (needed to
         be) drafted into this (plan).
      5. we felt that the productivity of the training program,
         itself, could perhaps be monitored through materials
         being produced, both quantitatively and qualitatively.
      6. we thought the superintendent altered us to some key
         variables:
            a. effectiveness of the program
            b. the grouping
            c. the timing
         These were keys toward which we could turn our attention.

IV. Group VI
   A. Initial action:
      1. We are going to keep especially close contacts within the
         evaluation department and its project manager to assure
         a. pre-programmed decisions for in-service materials
            (are sound)
      2. We made use of behavioral objectives by
         a. (judging) tasks with pre and post testing
         b. (judging) staff with the same treatment
      3. We could use some interaction analysis by
         a. handing out a check list of activities
         b. observers on a random basis.
      4. Check logistics: when you have this number of people
         working with technical equipment and in order for it to
         be handled alike, you want to make sure you have technical
         success.
      5. Keep an attendance roster: attendance may be an Indica-
         tor of success
6. Participants rating scale: another possible indicator of success
   a. how did participants receive presentations, particularly (effectiveness) in large or small groups.
   b. was the extent of program understood  
   c. what was their perceptions of resources
      (1) time  
      (2) schedule
7. Check principals (degree) of interactions with teachers (about program)--one of the program intents. (include reading specialists also).
8. Look at the communication channels using group dynamics...
9. Make sure "process is documented"
   a. have we added time schedules?
   b. if changes are made, how were they instituted and where?

V. Group VII
A. Initial actions (process plan)
   1. Preliminary task was to accept, seriously, a number of the superintendent's concerns, although it (the memo) did say go ahead with the plan, but watch it.
   2. Spend some time exploring specific barriers or problems the superintendent posed
   3. Recommend a modification of plan based on seriousness of barriers or that the possible barriers became a main part of the evaluation.
   4. Need to keep an open set look at developments as they occur, expecting the unexpected, by becoming a part of the (process) design ourselves (Roman numerals I through V).
   5. Develop a set of cells with the "evaluation methods" for each element--the time it is to be done--
   6. Concerns (II): principles (would dominate) the process evaluation effort, (utilizing) sampling (followed by) a progress list of system.
B. Problem:
   1. Task (design) failed to take into account the "attitudinal problem" of the teachers who as a group were not fully identified with the project.

Task 4

I. Group I
A. Initial action:
   1. Didn't want superintendent to know that we (evaluation department) were surprised about the "concerned groups" sudden interest (in our program).
a. we have been including references to community concerns in our periodic reports to him, but, like the objectives, they must have been misplaced.
b. new list of "concerned groups" may be a public relations problem.

2. Design a program to readminister the instruments or another form of the instrument in order to get an indication of change.
3. Evaluation (would disclose) a change score focusing on teachers to be used as information at June board meeting.
4. Plus, another series of observations with the same sample (hopefully) to indicate a change.

11. Group III
A. Initial action:
   1. To meet objective number 1, we would sample all of our teachers with a check list.
   2. Give the same reading test in a kind of pre-post test kind of operation.
   3. Attitude: review last couple of years "samples" on attitudes (tests) including administrators, pressure groups, teachers, and parents; plus students.
   4. After working with Heritage for two years we'd like to bring a (little more curriculum data) to bear on the operation
   5. Check other staff members for efforts of theirs in changes they have noticed (following) implementation or re-programming.
   6. Reading specialists for (aid) on materials and staff.
      a. Their observations could add creditability to our effort in the Board's eyes.

Supplementary Task

1. Group ( )
A. Initial actions (not audible)
B. Secondary statements (very weak statements)
   1. We would ask Industry to assess the needs
   2. Child welfare agencies to set their special needs and (thereby) building them into the CIPP model--could be a continuous needs assessment.
   3. We would ask both groups to build some product evaluation into the entire evaluation.

11. Group II
A. Initial actions:
   1. We relied heavily on that part of the statement that said "not very involved."
2. (We also relied) heavily on this man's experience as a politician.
3. We didn't want to write a speech for him.
4. Consulted (Jim Adams) the book from the Saginaw Schools and the four simple statements of the CIPP model in layman's terms.
   a. using Roman numerals I, II, III, IV, we outlined each step with specific examples under it of how it (CIPP model) would be used in implementing House Bill 204, both at state and local levels.

III. Group ( )
   A. Initial actions:
      1. We would get a hold of Charles Smith on our staff, who's an expert in communications and public relations.
      2. In the talk for Voteski, Smith would emphasize:
         a. accountability
         b. responsibility
      3. In the first part of the speech it would be mentioned that House Bill 204 would help establish priorities,
         a. community needs and opportunities
         b. economic resources in various areas
      4. We weren't going to use the word context or CIPP at all.
      5. House Bill 204 gives the (community) an opportunity to:
         a. get good programs from school to school
         b. develop programs based on "varied group" inputs
         c. involve community leaders in program development
      6. Central staff would make certain programs were carried out according to state laws and requirements as well as federal and/or local.
      7. We want the superintendent to know that we felt we were "sold out" -- we would use a "watered down" version of CIPP to let him know of our displeasure.
      8. We wanted some released time to build CIPP into the program exemplared by the bill itself.
      9. We wanted to build in a term "effective application" for reading the "kids" (affected by House Bill 204) needs based on assessment.

Task 5

I. Group III.
   A. Initial actions:
      1. We began by presenting background information to the Board and other citizens.
         a. test scores
         b. median
         c. grade equivalent
2. Then we would present the reading scores on overlays using Figure 2 we have
   a. showing "incremental gains" from previous years.
   b. "hi-lite" the gains by year with graphs using previous years' results.
3. Pupils read better because:
   a. came up (reading achievement) a year and a half from last year.
4. Show ranges of raw scores from school attendance areas.
5. Take a "typical" pupil and show how much vocabulary he acquired by:
   a. types of material he can read
   b. rate of reading
6. Describe what teachers did to produce these gains.
7. Show pupil attitudes toward reading by:
   a. increased circulation of library books.

II. Group II
A. Initial actions:
   1. Personal Note: We're assuming that we've had a part in designing this whole thing and that it flopped. I do not personally agree with playing the role that we're (saddled) with. I don't know what the percentage of this or the percentage of that is anymore. (reference to reading test scores)
   "Grade level" in all kinds of a relative change situation
   2. First assumption is "the two alternative strategies or solutions are not dismissed and are still possibilities
   3. We want to clear all possible presentations with the superintendent by:
      a. pointing out potential problems
      b. hi-lighting school differences:
         (1) stressing the fact that nothing should be hidden
         (2) deal with questions honestly and openly.
   4. Start by briefly describing the process we went through to achieve the end - awareness by everyone of the process is important (why?)
   5. Visual presentation
      a. gain scores by school
      b. gain scores for entire corporation
         (1) utilizing pre- and post-test results
      c. hi-light gains in the Evalapattah schools which are equal to or above all other schools in,
         (1) verbal dimensions
         (2) comprehension dimensions
      Note: we think this is a positive thing even if they end up below the school corporation's median. If they were to continue to gain at an (even) rate, they would soon overcome the median.
6. Point up importance of teacher as a variable in utilizing (materials)

7. Recycling: (not sure of the reason for recommending recycling)

8. Data used to compare gains within groups of students of equal aptitudes - might be useful.

III. Group ( )

A. Initial actions:
1. We looked at the last report (Task 4) in order to complete this task.
2. We decided to lay out some possible causes for the community's attitude.
3. We decided to do an evaluation of the causes which would effect community attitudes. Focusing on:
   a. the long-range plan had not been communicated very clearly to the community
   b. the expectations of the curricula were not correct in terms of gain
   c. the expectations were plainly unrealistic
4. Our presentation to the school board was structured to get at these typical causes for community dissatisfaction or their attitudes toward the program.

B. Presentation format (relating to teacher in-service program plan)
1. Utilized multi-media charts and graphs
2. Program lay out emphasizing
   a. what we were attempting to accomplish
   b. what the various elements were
   c. what the elements were meant to achieve.
3. We set standards for teacher behavior based on:
   a. survey instrument which indicated the community had a negative attitude toward teachers on issues of:
      (1) performance of students
      (2) behavior in classroom (teacher)
   b. wanted to show some definite changes in behavior
   c. giving teacher results to students
4. Used data (on teachers) and contrasted this with experiences of other districts across the country.

C. Closing comments: (an after-thought)
1. Because our product and means of attaining that product were such a "significant" success, we would consider evaluating the U.S. Office of Education.
2. We were trying to get at the boards' unrealistic expectations with the above statement.
3. As a result of the very tactful approach on our part at the board meeting, members acted very positively toward us.
4. After the meeting they would come up and talk with us, wanting to know if we ever considered running for public office.
   a. With all modesty we declined and left the meeting for our role, of course, is to assist in decision-making not stand up front and take the credit.
5. None of this was bought by Superintendent Sure who the next day sent us the final task - "Your work is outstanding and you will receive my full approval in the letter you will receive from the board. I think you had better update your resume."

IV. Group ( )
A. Initial Action:
   1. To get the report off the back of the evaluator we:
      a. Included a report which involved community staff in its entire preparation.
      b. Enlisted the aid of education writers who visited our schools and prepared information (final form) that would be a more presentable form to be released.
      c. Video tapes used for spot T.V. news programs (during the progress of program) would be shown at the board meeting.
APPENDIX L

CLASSIFICATION OF QUESTIONS AND COMPUTED RESPONSE DATA FROM SIMULATION OPINIONNAIRES RELATING TO SIMULATION DESIGN CRITERIA
CLASSIFICATION OF QUESTIONS AND COMPUTED RESPONSE DATA FROM SIMULATION OPINIONNAIRES RELATING TO SIMULATION DESIGN CRITERIA

I. General Data Information

The following data is a result of responses by participants who either took part in the simulation at the Phi Delta Kappa Symposium on June 22-23, 1970, or at the University of New Hampshire on August 4-7, 1970. The data has been placed in tables on the basis of:

1. Median and mean scores per questionnaire item
2. Location of simulation presentation
3. Real-life roles of simulation participants

Each question in the Simulation Opinionnaire was designed with a specific criterion statement in mind. Therefore, questions and response tables are placed beneath the criterion being surveyed.

II. Code Description Used in Tables

Location:
Phi Delta Kappa Symposium - P
University of New Hampshire - N

Roles:
Administrators - A
Evaluators - E
Methodologists - M
Graduate Students - G

Total Responses:
Total Group (AEM) - t
Total Group (AEMG) - t1

Central Tendency Measures:
Median - $M_{dn}$
Mean - $M_x$
I. To become familiar with the theory of evaluation through a simulation
game.

1. The objective of becoming familiar with the theory of evaluation
presented in the Phi Delta Kappa monograph through a simulation
game was accomplished.

\[
\begin{array}{cccccc}
A & E & M & t & G & t^1 \\
P & 3.86 & 3.67 & 3.94 & 3.88 & M_{dn} \\
N & 4.06 & 4.38 & 4.17 & 4.17 & 4.00 & 4.30 \\
\hline
P & 3.54 & 3.13 & 3.93 & 3.53 & M_x \\
N & 4.11 & 4.43 & 3.83 & 4.11 & 4.00 & 4.11 \\
\end{array}
\]

II. To focus the simulation experience on a common real life educational
setting for the purpose of involving participants in the game.

2. The purpose of relating a simulation game to a real life school
situation was accomplished.

\[
\begin{array}{cccccc}
A & E & M & t & G & t^1 \\
P & 3.98 & 4.12 & 4.00 & 4.02 & M_{dn} \\
\hline
P & 3.91 & 4.19 & 3.57 & 4.02 & M_x \\
N & 4.22 & 4.43 & 4.33 & 4.32 & 3.75 & 4.42 \\
\end{array}
\]

3. The characterizations used in the audio visual presentation were
easy to identify with in terms of my past experiences with school
systems.

\[
\begin{array}{cccccc}
A & E & M & t & G & t^1 \\
P & 4.07 & 4.15 & 3.79 & 4.03 & M_{dn} \\
\hline
P & 4.05 & 4.13 & 3.71 & 3.98 & M_x \\
N & 4.33 & 3.22 & 4.17 & 4.23 & 4.25 & 3.85 \\
\end{array}
\]

4. The purpose of using audio-visual materials to make the simulation
game more like a real life school situation was accomplished.

\[
\begin{array}{cccccc}
A & E & M & t & G & t^1 \\
P & 4.07 & 4.05 & 4.00 & 4.05 & M_{dn} \\
N & 3.90 & 4.12 & 4.00 & 4.00 & 3.50 & 3.93 \\
\hline
P & 4.14 & 4.00 & 4.00 & 4.06 & M_x \\
N & 3.88 & 4.11 & 4.00 & 4.00 & 3.50 & 3.92 \\
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\]
5. References to problems relating to reading achievement throughout the school corporation were made evident in the speeches.

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6. The content of the speeches was helpful in identifying with the simulated school corporation.

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7. Information presented in the speeches closely follows the topics currently being discussed and associated with large urban school systems.

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8. The person who played the part of the characterized secretary, Innes T'Know, was enthusiastic about the role he or she played in the game.

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III. To assure the on-going nature of the game by using a live characterization.

8. The person who played the part of the characterized secretary, Innes T'Know, was enthusiastic about the role he or she played in the game.
9. The secretary was knowledgeable about the information on file.

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10. The secretary moved the game along by offering advice when my group lacked necessary background materials for performing a particular task.

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IV. To assure the on-going nature of the game by using printed information that is applicable to evaluation theory.

11. Memos were clearly stated as to the tasks required to be performed by me, the evaluator.

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12. Materials in the file concerning past data on elementary reading programs in the entire school corporation were sufficient.

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13. Materials in the file concerning past data on elementary reading programs between attendance districts of the school corporation were helpful.

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14. Materials in the file concerning past data on elementary reading programs were realistic in terms of program descriptions.

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16. The information available for developing a context evaluation design for uncovering basic causes of the reading problem was helpful in completing Task 1.

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<tr>
<td>N</td>
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<td>4.17</td>
<td>4.00</td>
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18. Progress reports were helpful in updating information as to decisions made in the time intervals between actual task performances.

<p>| | | | | | |</p>
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</table>
19. Materials in the file available for assessing alternative strategies from different value positions in order to solve the reading problem were sufficient (Task 2).

<table>
<thead>
<tr>
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<th>G</th>
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<td>3.90</td>
<td>3.93</td>
<td>Mₓ</td>
</tr>
</tbody>
</table>

| P | 2.76 | 3.07 | 2.69 | 2.84 | Mdₙ |
| N | 3.88 | 3.71 | 3.67 | 3.76 | Mₓ |

28. Materials in the file available for making a simple and clearly stated progress report to the Board in reference to reading program objectives were sufficient (Task 5).

<table>
<thead>
<tr>
<th>A</th>
<th>E</th>
<th>M</th>
<th>t</th>
<th>G</th>
<th>t₁</th>
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<td>3.91</td>
<td>Mₓ</td>
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</table>

| P | 4.09 | 4.13 | 3.50 | 3.94 | Mdₙ |
| N | 3.78 | 3.71 | 3.50 | 3.64 | Mₓ |

V. To allow adequate time to complete each task.

15. The time allotted to perform the task of developing a strategy for obtaining information relative to the cause of the reading problem was adequate (Task 1).

<table>
<thead>
<tr>
<th>A</th>
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<td>4.00</td>
<td>4.00</td>
<td>Mₓ</td>
</tr>
</tbody>
</table>

| P | 2.95 | 2.67 | 2.92 | 2.76 | Mdₙ |
| N | 4.00 | 4.00 | 4.00 | 4.00 | Mₓ |

20. The time allotted to perform the task of developing a strategy for determining the best alternative from those presented in Task 2 was adequate.

<table>
<thead>
<tr>
<th>A</th>
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<th>G</th>
<th>t₁</th>
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<td>4.00</td>
<td>4.00</td>
<td>Mₓ</td>
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</table>

| P | 3.29 | 3.47 | 3.57 | 3.64 | Mdₙ |
| N | 4.22 | 3.71 | 4.00 | 4.00 | Mₓ |
21. The time allotted to perform the task of identifying and assessing potential barriers that might be built into the process evaluation plan was adequate (Task 3).

<table>
<thead>
<tr>
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<td>3.91</td>
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</table>

25. The time allotted to perform the exercise of applying the CIPP Evaluation Model to House Bill 204 was adequate.

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<thead>
<tr>
<th></th>
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</table>

26. The time allotted to update the product evaluation design involving past and future reading programs was adequate (Task 4).

<table>
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<tr>
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</tbody>
</table>

29. The time allotted to developing a report providing information relative to the outcome of the objectives established for students and teachers in the reading improvement program was adequate.

<table>
<thead>
<tr>
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</table>

VI. To allow participants to design a report (simulated response) for all tasks and the supplemental exercise that utilizes specific components of evaluation theory as they relate to the available simulated information.

No responses.
VII. To provide a detailed general report after tasks 1, 4, 5, and the supplemental exercise that would enable the participants to self-evaluate their own report.

17. The simulated response to Task 1 was realistic in terms of the information made available.

<table>
<thead>
<tr>
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</table>

27. The simulated response to Task 4 was realistic in terms of the information made available.

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<td>3.90</td>
<td>3.88</td>
<td>4.00</td>
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29. The simulated response to Task 5 was realistic in terms of the information made available.

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<td>3.75</td>
<td>3.97</td>
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<td>3.94</td>
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</table>

21. The simulated response for applying the CIPP Evaluation Model to House Bill 204 was realistic in terms of the theory and information available.

<table>
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<table>
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31. The final simulated recommendation that the in-service teacher training be extended from grades 4 through 6 in order to continue to improve student reading achievement throughout the school corporation was an excellent conclusion for the simulation game.

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<td>4.75</td>
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<td>3.50</td>
<td>4.32</td>
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</table>

VIII. To challenge the knowledges and skills of the participants as evaluators in a short summation exercise.

22. The telephone call from the superintendent to the evaluator, Dr. Lave, added a realistic work priority dimension to the simulation game.

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<td>3.83</td>
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23. The application of the CIPP Evaluation Model to House Bill 204 provided a challenging short-term exercise for my knowledge and skills as an evaluator.

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</table>

25. The time allotted to perform the exercise of applying the CIPP Evaluation Model to House Bill 204 was adequate.

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<td>4.13</td>
<td>4.11</td>
<td>3.83</td>
<td>4.06</td>
</tr>
</tbody>
</table>

IX. To assure adequate participation and a diverse input of administrative, evaluative and methodological knowledges and skills by assigning individuals to groups.

34. The composition of the evaluation team in terms of theoreticians and/or practitioners seated at my table was helpful in developing strategies for performing tasks in the simulation game.

\[
\begin{array}{cccccc}
P & 3.91 & 4.05 & 3.83 & 3.95 & M_{dn} \\
N & 4.25 & 4.00 & 3.90 & 4.06 & 3.50 & 4.03 \\
\end{array}
\]

\[
\begin{array}{cccccc}
P & 3.86 & 4.06 & 3.50 & 3.85 & M_x \\
N & 4.33 & 4.00 & 3.83 & 4.09 & 3.75 & 4.04 \\
\end{array}
\]

33. The numerical size of the evaluation team seated at my table allowed for adequate participation on my part in the problem-solving tasks of the simulation game.

\[
\begin{array}{cccccc}
P & 4.21 & 3.94 & 4.06 & 4.09 & M_{dn} \\
N & 4.38 & 4.38 & 4.17 & 4.32 & 4.00 & 4.27 \\
\end{array}
\]

\[
\begin{array}{cccccc}
P & 4.27 & 3.81 & 4.00 & 4.04 & M_x \\
N & 4.33 & 4.13 & 4.17 & 4.32 & 3.75 & 4.23 \\
\end{array}
\]

X. To provide adequate physical arrangements for the simulation to take place.

35. The physical arrangement of the room was adequate for my fullest participation in the simulation game.

\[
\begin{array}{cccccc}
P & 4.10 & 4.10 & 4.06 & 4.09 & M_{dn} \\
N & 3.75 & 3.92 & 4.17 & 3.95 & 2.50 & 3.83 \\
\end{array}
\]

\[
\begin{array}{cccccc}
P & 4.14 & 4.00 & 3.86 & 4.02 & M_x \\
N & 3.78 & 3.86 & 4.00 & 3.86 & 2.50 & 3.65 \\
\end{array}
\]
APPENDIX M

FREQUENCY DISTRIBUTION OF RESPONSES TO SIMULATION OPINIONNAIRE: SYMPOSIUM FIELD TEST
FREQUENCY DISTRIBUTION OF RESPONSES
TO SIMULATION OPINIONNAIRE

I. General Data Information

The following data is a result of responses by participants who took part in a simulation game presented at the Phi Delta Kappa Symposium on June 22 and 23, 1970. The total number of initial participants in the game was 64. The number responding to the opinionnaire at the conclusion of the simulation was 52 (N=52). Not every respondent to the opinionnaire acknowledged all statements.

II. Code Description

Response - (r):

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<tr>
<th>Response</th>
<th>Frequency</th>
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<td>Administrators - A</td>
</tr>
<tr>
<td>Disagree - 2</td>
<td>Evaluators - E</td>
</tr>
<tr>
<td>Undecided or Neutral - 3</td>
<td>Methodologists - M</td>
</tr>
<tr>
<td>Agree - 4</td>
<td>Total Frequency - f</td>
</tr>
<tr>
<td>Strongly Agree - 5</td>
<td></td>
</tr>
</tbody>
</table>

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III. Item Analysis

1. The objective of becoming familiar with the theory of evaluation presented in the Phi Delta Kappa monograph through a simulation game was accomplished.

2. The purpose of relating a simulation game to a real life school situation was accomplished.

3. The characterizations used in the audio visual presentation were easy to identify with in terms of my past experiences with school systems.

4. The purpose of using audio visual materials to make the simulation game more like a real life school situation was accomplished.

5. References to problems relating to reading achievement throughout the school corporation were made evident in the speeches.

6. The content of the speeches was helpful in identifying with the simulated school corporation.

7. Information presented in the speeches closely follows the topics currently being discussed and associated with large urban school systems.
8. The person who played the part of the characterized secretary, Innes T'Know, was enthusiastic about the role he or she played in the game.

9. The secretary was knowledgeable about the information on file.

10. The secretary moved the game along by offering advice when my group lacked necessary background materials for performing a particular task.

11. Memos were clearly stated as to the tasks required to be performed by me, the evaluator.

12. Materials in the file concerning past data on elementary reading programs in the entire school corporation were sufficient.

13. Materials in the file concerning past data on elementary reading programs between attendance districts of the school corporations were helpful.

14. Materials in the file concerning past data on elementary reading programs were realistic in terms of program descriptions.
15. The time allotted to perform the task of developing a strategy for obtaining information relative to the cause of the reading problem was adequate. (Task 1)

16. The information available for developing a context evaluation design for uncovering basic causes of the reading problem was helpful in completing Task 1.

17. The simulated response to Task 1 was realistic in terms of the information made available.

18. Progress reports were helpful in updating information as to decisions made in the time intervals between actual task performances.

19. Materials in the file available for assessing alternative strategies from different value positions in order to solve the reading problem were sufficient. (Task 2)

20. The time allotted to perform the task of developing a strategy for determining the best alternative from those presented in Task 2 was adequate.

21. The time allotted to perform the task of identifying and assessing potential barriers that might be built into the process evaluation plan was adequate. (Task 3)
22. The telephone call from the superintendent to the evaluator, Dr. Lave, added a realistic work priority dimension to the simulation game.

23. The application of the CIPP Evaluation Model to House Bill 204 provided a challenging short-term exercise for my knowledge and skills as an evaluator.

24. The simulated response for applying the CIPP Evaluation Model to House Bill 204 was realistic in terms of the theory and information made available.

25. The time allotted to perform the exercise of applying the CIPP Evaluation Model to House Bill 204 was adequate.

26. The time allotted to update the product evaluation design involving past and future reading programs was adequate. (Task 4)

27. The simulated response to Task 4 was realistic in terms of the information made available.

28. Materials in the file available for making a simple and clearly stated progress report to the Board in reference to reading program objectives were sufficient. (Task 5)
29. The simulated response to Task 5 was realistic in terms of the information made available.

<table>
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</tbody>
</table>

30. The time allotted to developing a report providing information relative to the outcome of the objectives established for students and teachers in the reading improvement program was adequate.

<table>
<thead>
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31. The final simulated recommendation that the in-service teacher training be extended from grades 4 thru 6 in order to continue to improve student reading achievement throughout the school corporation was an excellent conclusion for the simulation game.

<table>
<thead>
<tr>
<th></th>
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32. The simulated responses made by the simulation authors after Tasks 1, 4, 5 and the supplementary exercise was adequate as a feedback device.

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33. The numerical size of the evaluation team seated at my table allowed for adequate participation on my part in the problem-solving tasks of the simulation game.

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34. The composition of the evaluation team in terms of theoreticians and/or practitioners seated at my table was helpful in developing strategies for performing tasks in the simulation game.

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35. The physical arrangement of the room was adequate for my fullest participation in the simulation game.
APPENDIX N

FREQUENCY DISTRIBUTION OF RESPONSES
TO SIMULATION OPINIONNAIRE:
NEW HAMPSHIRE FIELD TEST

250
FREQUENCY DISTRIBUTION OF RESPONSES
TO SIMULATION OPINIONNAIRE

I. General Data Information

The following data is a result of responses by participants who took part in a simulation game presented at the University of New Hampshire on August 4 - August 7, 1970. The total number of participants in the game and responding to the opinionnaire was 26 (N=26).

II. Code Description

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<th>Frequency - (f)</th>
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<tr>
<td>Disagree - 2</td>
<td>Evaluators - E</td>
</tr>
<tr>
<td>Undecided or Neutral - 3</td>
<td>Methodologists - M</td>
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<tr>
<td>Agree - 4</td>
<td>Graduate Students - O</td>
</tr>
<tr>
<td>Strongly Agree - 5</td>
<td>Total Frequency - ((f^1))</td>
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251
III. Item Analysis

1. The objective of becoming familiar with the theory of evaluation presented in the Phi Delta Kappa monograph through a simulation game was accomplished.

2. The purpose of relating a simulation game to a real life school situation was accomplished.

3. The characterizations used in the audio visual presentation were easy to identify with in terms of my past experiences with school systems.

4. The purpose of using audio visual materials to make the simulation game more like a real life school situation was accomplished.

5. References to problems relating to reading achievement throughout the school corporation were made evident in the speeches.

6. The content of the speeches was helpful in identifying with the simulated school corporation.
7. Information presented in the speeches closely follows the topics currently being discussed and associated with large urban school systems.

8. The person who played the part of the characterized secretary, Innes T'Know, was enthusiastic about the role he or she played in the game.

9. The secretary was knowledgeable about the information on file.

10. The secretary moved the game along by offering advice when my group lacked necessary background materials for performing a particular task.

11. Memos were clearly stated as to the tasks required to be performed by me, the evaluator.

12. Materials in the file concerning past data on elementary reading programs in the entire school corporation were sufficient.
13. Materials in the file concerning past data on elementary reading programs between attendance districts of the school corporations were helpful.

14. Materials in the file concerning past data on elementary reading programs were realistic in terms of program descriptions.

15. The time allotted to perform the task of developing a strategy for obtaining information relative to the cause of the reading problem was adequate. (Task 1)

16. The information available for developing a context evaluation design for uncovering basic causes of the reading problem was helpful in completing Task 1.

17. The simulated response to Task 1 was realistic in terms of the information made available.

18. Progress reports were helpful in updating information as to decisions made in the time intervals between actual task performances.
19. Materials in the file available for assessing alternative strategies from different value positions in order to solve the reading problem were sufficient (Task 2).

20. The time allotted to perform the task of developing a strategy for determining the best alternative from those presented in Task 2 was adequate.

21. The time allotted to perform the task of identifying and assessing potential barriers that might be built into the process evaluation plan was adequate (Task 3).

22. The telephone call from the superintendent to the evaluator, Dr. Lave, added a realistic work priority dimension to the simulation game.

23. The application of the CIPP Evaluation Model to House Bill 204 provided a challenging short-term exercise for my knowledge and skills as an evaluator.

24. The simulated response for applying the CIPP Evaluation Model to House Bill 204 was realistic in terms of the theory and information made available.
<table>
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<th>The time allotted to update the product evaluation design involving past and future reading programs was adequate (Task 4).</th>
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<th>Materials in the file available for making a simple and clearly stated progress report to the Board in reference to reading program objectives were sufficient (Task 5).</th>
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</table>
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The simulated responses made by the simulation authors after Tasks 1, 4, 5 and the supplementary exercise was adequate as a feedback device.

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