

5-19-1972

## Development of guidelines for using office simulation to teach office practice in the Vietnamese public high schools

Luu Thi Minh Chau  
*Portland State University*

Let us know how access to this document benefits you.

Follow this and additional works at: [http://pdxscholar.library.pdx.edu/open\\_access\\_etds](http://pdxscholar.library.pdx.edu/open_access_etds)



Part of the [Business Commons](#), and the [Education Commons](#)

---

### Recommended Citation

Minh Chau, Luu Thi, "Development of guidelines for using office simulation to teach office practice in the Vietnamese public high schools" (1972). *Dissertations and Theses*. Paper 1571.

10.15760/etd.1565

This Thesis is brought to you for free and open access. It has been accepted for inclusion in Dissertations and Theses by an authorized administrator of PDXScholar. For more information, please contact [pdxscholar@pdx.edu](mailto:pdxscholar@pdx.edu).

AN ABSTRACT OF THE THESIS OF Luu Thi Minh Chau for the Master of Science in Teaching in Business Education presented May 19, 1972.

Title: Development of Guidelines for Using Office Simulation to Teach Office Practice in the Vietnamese Public High Schools

APPROVED BY MEMBERS OF THE THESIS COMMITTEE:

Leonard Robertson, Chairman

---

Carl H. Pollock, Jr.

---

Morton Maister

The Vietnamese secondary school system is experimenting with the comprehensive concept. The office education program, one of the first fields included in the process, is at its initial stage of development in Vietnam. A reference guide for a realistic teaching technique is needed to help develop a different approach for the program.

Statement of the Problem

The problem studied was to prepare a set of guidelines for using office simulation to teach office practice in the Vietnamese comprehensive high schools.

Purposes of the Study

The main purposes of this study were to: (1) introduce a different and realistic approach in the teaching and learning situation for the office practice course in Vietnam; and (2) Provide

a general reference guide for an office simulation approach in teaching office practice in Vietnamese public high schools.

#### Methods and Procedures

Research studies and reports, as well as professional writings pertaining to simulation approach in office education and other fields, were reviewed, analyzed and synthesized. The period covered was from 1962 to 1971.

The preliminary review revealed the six major areas that were necessary in building guidelines for the Vietnamese business educators and school administrators who have not used the simulation technique. The later selection of data was made based on these six identified areas:

1. The objectives of the office practice course.
2. The simulation technique and its contribution to the office practice course.
3. The criteria for designing an educational simulation model.
4. The organization of the simulated environment.
5. The operation of office simulation.
6. The teacher's role in the simulation program.

Telephone interviews were made with the former business education advisor in Thu Duc Demonstration High School to acquire a general outlook into the present status of the office practice course in Vietnam.

#### Findings

The findings of this study were presented as a set of general guidelines. These guidelines were based on the theoretical and

practical principles and opinions on instructional simulation, in office education and other fields, as experimented, researched and expressed in the United States. They were organized into four areas:

1. Design guidelines included the following steps:

- a. Establishment of objectives
- b. System analysis
- c. Data collection
- d. Establishment of model framework
- e. Manual and script writing
- f. Model tryout
- g. Student evaluation procedure
- h. Model redesign

2. Administrative guidelines concerned:

- a. Administrative supports
- b. Course prerequisites and planning
- c. Curriculum planning
- d. Equipment and furniture
- e. Class sizes
- f. Employee's manuals
- g. Business supplies and forms
- h. Classroom layout

3. Operational guidelines concerned:

- a. Pretests
- b. Simulation orientation
- c. Intensive training
- d. Employment interview and role assignment

- e. Simulation warmup
  - f. Full-scale simulation
  - g. Debriefing sessions
  - h. Post-simulation debriefing
  - i. Post-tests
4. Teacher education guidelines involved:
- a. Teacher's attitude
  - b. Teacher's role
  - c. Working competency
  - d. Professional responsibility

#### Main Recommendations

As the result of the study, it was recommended that:

1. A field experiment be conducted to test the workability of the guidelines with the Vietnamese business educators.
2. Business teacher education in the Vietnamese educational institutions include the training to use, design, and modify existing simulation games.
3. Commercial simulation packages used in other educational systems be made available to the Vietnamese teachers.
4. Research and evaluation be done in view of the use of mobile office education units in Vietnam.
5. Workshops or practicum be organized to introduce the simulation technique to business education teachers and school administrators.

DEVELOPMENT OF GUIDELINES FOR USING OFFICE SIMULATION  
TO TEACH OFFICE PRACTICE IN THE VIETNAMESE  
PUBLIC HIGH SCHOOLS

BY

LUU THI MINH CHAU

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

MASTER OF SCIENCE IN TEACHING  
in  
BUSINESS EDUCATION

Portland State University  
1972

TO THE OFFICE OF GRADUATE STUDIES:

The members of the Committee approve the thesis of Luu Thi Minh Chau presented May 19, 1972.

Leonard Robertson, Chairman

Carl H. Pollock, Jr.

Norton S. Malter

APPROVED:

Donald D. Parker, Dean of Business Administration

David T. Clark, Dean of Graduate Studies

## ACKNOWLEDGMENTS

I am indebted to Dr. Leonard F. Robertson, who served as my academic advisor and chairman of my thesis committee, for the valuable time, advice and guidance he has given in writing this thesis and throughout my undergraduate and graduate work.

I am grateful to Dr. Carl H. Pollock, Jr., for his suggestions, direction and assistance. His help has made the completion of this thesis possible.

I am deeply thankful to Dr. Morton Malter for his advice and understanding in the preparation of the various phases of this thesis.

I wish to express my sincere appreciation to Dr. W. Spalding, Dr. W. Inman and Miss Marguerite Appel for their unlimited help and encouragement; to Timothy S. Leatherman, who has been most helpful and patient; and to all my friends in Portland and Saigon for their services.

I also wish to thank Sandra Hobbs for her efficient and cheerful assistance.



## TABLE OF CONTENTS

	PAGE
ACKNOWLEDGMENTS . . . . .	iii
LIST OF TABLES . . . . .	vii
CHAPTER	
I INTRODUCTION . . . . .	1
Introduction . . . . .	1
Statement of the Problem . . . . .	1
Scope of the Problem . . . . .	2
Purpose of the Study . . . . .	3
Delimitations of the Study . . . . .	4
Limitations of the Study . . . . .	4
Definitions of Terms . . . . .	4
Summary . . . . .	6
II METHODS AND PROCEDURES . . . . .	7
Introduction . . . . .	7
Personal Telephone Interview . . . . .	8
Time Involved . . . . .	8
Procedural Research Plan . . . . .	8
Pre-data Collection . . . . .	8
Collection and Organization of Data. . . . .	9
Processing and Synthesis of Data . . . . .	11

## CHAPTER

	Organization of the Study . . . . .	11
	Summary . . . . .	12
III	AN ASSESSMENT OF THE OFFICE SIMULATION TECHNIQUE THROUGH LITERATURE . . . . .	13
	Introduction . . . . .	13
	Objectives of the Office Practice course . . . . .	13
	Simulation and its Contributions to the Office Practice Course . . . . .	17
	Instructional Simulation . . . . .	17
	Characteristics of Instructional Simulation . . . . .	18
	Purposes and Uses of Simulation. . . . .	20
	Strengths and Weaknesses of Instructional Simulation . . . . .	23
	Justification of Office Simulation . . . . .	26
	Criteria for Designing an Educational Simulation . . . . .	30
	Organization of the Simulated Environment . . . . .	44
	Course Prerequisites . . . . .	44
	Equipment and Facilities . . . . .	45
	Class Sizes . . . . .	46
	Simulated Materials Needed . . . . .	47
	Classroom Layout . . . . .	48
	The Operation of Office Simulation . . . . .	48
	Teacher's Role Perceived . . . . .	52
	Summary . . . . .	57

CHAPTER		
IV	GUIDELINES FOR INTRODUCING THE OFFICE SIMULATION TECHNIQUE INTO VIETNAMESE PUBLIC EDUCATION . . . . .	58
	Introduction . . . . .	58
	Guidelines . . . . .	59
	Design Guidelines . . . . .	59
	Administrative Guidelines . . . . .	61
	Operational Guidelines . . . . .	62
	Teacher Education Guidelines . . . . .	64
	Summary . . . . .	64
V	SUMMARY, OBSERVATIONS AND RECOMMENDATIONS . .	65
	Summary of the Study . . . . .	65
	General Observations . . . . .	66
	Nature of Research Findings and Professional Writings . . . . .	66
	The Major Areas under Study . . . . .	67
	Recommendations . . . . .	68
	Conclusion . . . . .	69
	BIBLIOGRAPHY . . . . .	71
	APPENDICES . . . . .	80
	A Examples of literature and research containing lists of objectives . . . . .	80
	B Examples of teachers' designs and operations of their own office simulations . . . . .	81
	C Copy of letter from Miss Marguerite Appel. . .	82

LIST OF TABLES

TABLE		PAGE
I	STEPS IN THE DESIGN OF AN INSTRUCTIONAL SIMULATION SYSTEM . . . . .	32
II	EMPLOYEE EVALUATION FORM . . . . .	41

## CHAPTER I

### INTRODUCTION

#### I. INTRODUCTION

Teaching techniques play a very important part in learning; they put learning to work or fail to do so. Effective teachers take human development, group dynamics, human psychology, educational psychology and philosophy into consideration and devise methods to help students set up purposes for their study.

Historically, education has witnessed innovations in teaching techniques. For office practice especially, some educators feel that the simulation approach<sup>1</sup> offers educational relevance to prepare vocationally competent students and to fit them to the world of work.

#### II. STATEMENT OF THE PROBLEM

The problem in this study is to prepare a set of guidelines to teach office practice using office simulation in the Vietnamese comprehensive high schools.

<sup>1</sup>Simulation approach in teaching office practice is defined as a technique where a business office, complete with environment, working papers, and office situations, is established in a classroom for instructional purposes. (Garth A. Hanson, "Practicum for Simulated Methods in Office Occupation Education, Final Report." Logan: Utah State University Department of Business Education and Office Administration, 1969, p. 5.)

In order to prepare the guidelines, it is necessary to answer the following questions:

1. What are the goals and objectives of the office practice course?
2. What are the purposes of simulation and its contribution to fulfill the objectives of the office practice course?
3. What are the criteria for designing an office simulation?
4. What is the organization of the simulated environment?
5. How is the teacher's role perceived in a simulation?
6. What guidelines can be identified which are applicable to the Vietnamese public high schools?

### III. SCOPE OF THE PROBLEM

Office practice was first taught in Thu Duc Demonstration High School in Thu Duc, Vietnam, in the school year of 1968-1969. It was open for 11th- and 12th-grade students.

The literature indicates that the method of teaching, designed by the business education department of Thu Duc<sup>1</sup>, involves:

1. A teaching-learning situation where all the students involved are given instructions at the same time, on the same topics.
2. Exercises and research.
3. Student role-playing concerning a secretary's attitudes and characteristics.

<sup>1</sup>"Course Guide in Business Education for High School," (Thu Duc: Thu Duc Demonstration High School, 1968), p. 21 (mimeographed).

The students are not exposed to the office situations where they will be working; and owing to the newness of the subject in the Vietnamese public high schools and the unavailability of research studies and literature about different innovative approaches, it is assumed that some teachers still use conventional methods to teach this vocationally oriented course.

A realistic teaching technique is needed to acquaint and familiarize the students with real working situations so that they can efficiently learn to cope with problems in the office, work with people, and determine the kind of job they want.

#### IV. PURPOSE OF THE STUDY

It is hoped that the results of the study will fulfill the following needs:

1. The need for a different and realistic approach in the teaching and learning situation in Vietnam public high schools where office practice is part of the curriculum.
2. The need for reference guides for an office simulation approach in teaching office practice.
3. The need to know the effectiveness of the simulation approach in teaching office practice.
4. The need to know the results of experiments done with a simulation approach, so that a school, especially a Vietnamese public high school, can see if it is feasible to set up an experiment of its own, using its own resources and environment.

## V. DELIMITATIONS OF THE STUDY

This research study deals with actual research studies and selected professional writings from 1962 to 1971 pertaining to the use of office simulation to teach office practice and related fields. The results of the study included only available research studies and literature. Any doctoral and/or master's theses that cannot be borrowed through Portland State University's interlibrary loan service and that have not been abstracted were not included.

## VI. LIMITATIONS OF THE STUDY

The limitations of the study are:

1. All of the research studies and reports that are included in this study were done in the United States.
2. This study is valid and reliable only to the extent of validity and reliability of the primary data used.
3. The data collected from the research studies and selected professional literature are limited by their timeliness.

## VII. DEFINITIONS OF TERMS

The terms used in this study that require interpretation are defined as follows:

Office Practice is defined by Archer as:

A terminal course commonly given in high schools, vocational schools, private business schools, junior colleges and on-the-job training facilities to round out, integrate, and apply the skills, knowledges, habits, and attitudes normally learned separately in other business courses. The



training is designed to develop the level of competency required to obtain an office position and to perform successfully in the assignment.<sup>1</sup>

Office Simulation is defined as an instructional technique to teach office practice, in which a model office within the confines of a school or imported to the school, "where facilities, instructional content, and equipment are organized in such a way that they assume the appearance of a real office operation."<sup>2</sup>

Mobile Office Simulation is a simulated office set up in a trailer so that it can be moved to different areas. The ideas and practice of this Mobile Office Education Unit (MOE) were first originated at Utah State University.

Simulated Materials are the interrelated materials necessary for the operation of the model simulated office.

Pilot High Schools is a term used to indicate the public high schools scattered in the four regions of Vietnam that have been chosen by the Ministry of Education for the implementation of the comprehensive secondary school curriculum.

Secondary Demonstration Schools are the high schools attached to the Faculties of Pedagogy at Universities of Saigon, Hue, and Cantho. They serve as laboratory high schools for student-teachers of the above faculties as well as experimenting medium for new

<sup>1</sup>Fred C. Archer, "The Status of Office Practice," The Office Practice Program in Business Education, The EBTA Yearbook, Vol. XLIII (Somerville, New Jersey: Somerset Press, 1969), p. 3.

<sup>2</sup>Dolores Kilchenstein, "Simulation in Business and Office Education," Business Education Forum, February 1970, p. 7.

curriculum and instructional concepts.

Comprehensive Secondary School Curriculum is the curriculum for high schools, where besides the academic subjects, guidance, business education, home economics and industrial arts are included.

#### VIII. SUMMARY

This study endeavors to develop a set of general guidelines using office simulation to teach office practice courses in the Vietnamese public high schools.

The purpose of the study is to provide an insight to a new approach and a reference guide which the office practice teacher in Vietnam can modify to fit his needs should he wish to use it.

The data, analysis and conclusions are limited to the timeliness, accuracy, and availability of research studies and selected writings.

## CHAPTER II

### METHODS AND PROCEDURES

#### I. INTRODUCTION

The procedures involved in this study were to:

1. Investigate literature in the field of instructional simulation.
2. Examine literature in the field of office simulation and office practice.
3. Investigate literature available in the uses, designs, and administration of instructional simulation and office simulation.
4. Interview the business education advisor of the Ohio University Contract Team who helped implement the business education curriculum in the Faculty of Pedagogy, University of Saigon, and in the Thu Duc Demonstration High School.
5. Examine samples of two selected commercial office simulation packages.
6. Synthesize general guidelines for using office simulation to teach office practice in the Vietnamese high schools.
7. Prepare recommendations for the utilization of simulation to teach office practice courses in Vietnam and for further studies and improvement in this area.

## II. PERSONAL TELEPHONE INTERVIEW

Miss Margerite Appel, presently Coordinator of Overseas Projects at the Office of International Studies, Ohio University, was the business education advisor to the Faculty of Pedagogy, University of Saigon, and Thu Duc Demonstration High School. She was interviewed two times over the telephone. This was done to provide a professional outlook to the problems confronted in the Vietnamese public high schools in implementing the comprehensive curriculum concept.

## III. TIME INVOLVED

The total time involved in this study was approximately six months.

## IV. PROCEDURAL RESEARCH PLAN

The plan undertaken to investigate the findings of research and ideas, principles and opinions expressed in selected professional writings in the area of instructional simulation for the office practice course is as follows:

### Pre-data Collection.

A basic examination of educational research studies, yearbooks, periodicals and indices was made to familiarize the investigator with the professional writings and research studies pertaining to the office simulation technique.

A tentative bibliography was prepared for research studies, reports and professional writings during the investigation of the

literature. They were limited to studies and articles finished between 1962 and 1971, because office simulation is a relatively new approach, and a new term to be used in the last decade.

The references used to locate the titles of research and non-research studies were:

General References:

1. "A Guide to Research in Business Education," National Business Education Quarterly 35, Winter 1966-1967.
2. "Summaries of Studies and Research in Business Education," National Business Education Quarterly, Vol. 31-38, 1962-1970.

Indices:

1. Business Education Index.
2. Education Index.

Guides to Research:

1. Dissertation Abstracts.
2. The Educational Research Information Center (ERIC).

Books:

1. Library Card Catalog.
2. Books in Print U.S.A.

From the above references, guides, indices and books, a tentative bibliography was prepared.

Collection and Organization of Data

Since simulation is new as a technique to teach the office practice course, there is not much research done in this area. An effort was made to include a selected number of research reports

concerning instructional simulation in other areas of education in the investigation. Collection and organization of data from research studies and reports and from the professional writings are described below.

Research Studies and/or Reports. Copies of research studies and reports were obtained mainly through interlibrary loan and microfiche; those not available from these services were omitted from the tentative bibliography. The research studies and reports were read and abstracted; notes and excerpts were taken. These notes and excerpts were analyzed. From this analysis, six areas of interest were identified to form the framework for a set of principles and practices suggesting characteristics of the simulation technique.

Professional Writings. The professional writings were obtained mainly from periodicals at Portland State University and the public libraries. Each selected article was read and notes and excerpts were taken of information relevant to using simulation to teach the office practice course.

Due to the time limit permitted the investigator, all the articles between 1962 and 1971 were read, but only those concerned with the six identified areas were selected. The selection criteria are the relevance and adequacy of the articles to the related areas under investigation. If the professional writing was not related to the office simulation technique, it was removed from the tentative list.

### Processing and Synthesis of Data

The data obtained from the research studies and professional writings in the area of instructional simulation and the office practice course were used as the basis for the synthesis of data.

The six main areas under investigation were:

1. The objectives of the office practice course.
2. The simulation technique and its contribution to the office practice course.
3. The criteria for designing the educational simulation model.
4. The organization of the simulated environment.
5. The operation of office simulation.
6. The teacher's role in the simulation program.

The data of each area was studied, and a synthesis was made of the research findings and ideas expressed in literature in each area. This constituted the basis for Chapter III.

### Organization of the Study

The study is presented in five chapters.

Chapter I presents the statement, the scope of the problem, the purpose of the study, the delimitation and limitation of the study as well as the definition of terms used.

Chapter II contains the procedure, namely the preparation of the bibliography, the collection and recording of data, synthesis of data and organization of the study.

Chapter III covers the results of analysis and synthesis of data in six main areas of interest.

Chapter IV presents the set of general guidelines for introducing the office simulation technique into Vietnamese public education.

The summary, general observations, and recommendations for further research are found in Chapter V.

## V. SUMMARY

The research method used for this study involves the documentary approach.

Due to the comparative recentness of the problem under investigation, the time limits and various intangible factors, the assessment is primarily based on data that did not contain the controls necessary for a true research evaluation. The research plan consists of the personal telephone interviews and the report of the analysis and synthesis of the findings of related literature.



## CHAPTER III

### AN ASSESSMENT OF THE OFFICE SIMULATION TECHNIQUE THROUGH LITERATURE

#### I. INTRODUCTION

An assessment of the office simulation technique is made from the review, analysis and synthesis of related literature. To achieve this goal, the organization of Chapter III covers the following steps:

1. To present the objectives and goals of the office practice course.
2. To review instructional simulation and its contributions to the objectives of the office practice course.
3. To highlight the criteria used to design an educational simulation model.
4. To discuss the organization of the simulated environment.
5. To identify the operation of office simulation.
6. To relate the teacher's role in a simulation course.

Each of the above six sections will be summarized with special attention given to the various aspects concerning office simulation of the item under investigation.

#### II. OBJECTIVES OF THE OFFICE PRACTICE COURSE

Business educators seem to agree that office practice courses "bridge the gap between the school work and the office

work."<sup>1</sup> The name of the course itself is an inclusive term which may be referred to as Office Practice, Office Procedures, Office Training, Office Techniques, Clerical Practice, Secretarial Practice, Clerical Office Practice, Machine Practice, Office Machines, etc.<sup>2</sup>

The program is a broad one, involving a variety of jobs which are open to high school students after graduation. Consequently, the objectives of the course are emphasized in relation to the needs of the students and the community. Tate<sup>3</sup> and Calhoun<sup>4</sup> agreed that the basic common objectives are grouped under:

1. Skill development and improvement.
2. Acquisition of related knowledges and understanding.
3. Integration of knowledges and skills and their application to the requirements of an office job.
4. Attitudes, work habits, personalities and character traits development.

The emphasis on certain objectives of the office practice course varies according to the different schools and communities.

<sup>1</sup>Doris A. Berry, "The Role of Office Practice Instruction in the Training for General Office Assignment," (Doctor's dissertation, Indiana University, 1963), p. 178.

<sup>2</sup>Donald Tate, "Office Courses Aim at Salable Skills," Catholic School Journal, 66, June 1966, pp. 46-51.

<sup>3</sup>ibid.

<sup>4</sup>Calfrey C. Calhoun, "Instructional Procedures," The Office Practice Program in Business Education, The Eastern Business Teachers Association Yearbook, Vol. XLIII (Somerville, New Jersey: Somerset Press, 1969), pp. 143-167.

The curriculum guide of Jackson High School in Portland, Oregon emphasizes the skills of operating different types of office machines; the filing process; and the general office procedures together with personality development, conducts, manners, and other personal qualities conducive to successful employment as goals for the office practice classes.<sup>1</sup>

Cresto noted that the main goals for the office practice course are to help the students understand basic practices and systems; and emphasis at the same time is placed on the need for cooperative attitude among employees.<sup>2</sup>

The aims of the same course offered in Thu Duc Demonstration High School in Thu Duc, Vietnam are to train the students in office procedures; to develop in them desirable office characteristics and attitudes and abilities to work in an office; besides giving them basic skills for clerical work.<sup>3</sup>

Berry recognized the fact that the objectives of the office practice course are written under the auspices of the specific school circumstances and also from literature, research, and teachers.<sup>4</sup>

<sup>1</sup>"Business Department Offers a Variety of Skills," The Frontierman, Vol. 5 (Portland: Jackson High School, 1971), p. 4.

<sup>2</sup>Lorraine Cresto, "Block Clerical Secretarial Programs, A Community College Curriculum Guide" (California: Shasta Community College, 1970), p. 9.

<sup>3</sup>"Course Guide in Business Education for High Schools" (Thu Duc: Thu Duc Demonstration High School, 1968), p. 21 (mimeographed).

<sup>4</sup>Doris A. Berry, op. cit., p. 178.

These sources all point out that the primary objectives of the office practice course of "bridging the gap" between school and the world of work and providing them with a foundation of career development<sup>1</sup> can be met by the following typical specific objectives best described by the Berkeley, California High School:

1. To acquaint the student with current office practice and to offer the opportunity for adjustment to actual business situations.
2. To develop skills in fundamental care and operation of office machines common to business offices.
3. To evaluate work done according to the requirements of business in the office atmosphere of the classroom.
4. To encourage the development of ability to follow directions and at the same time to be self-reliant.
5. To present the responsibilities of the employee with respect to skills, standard of production, office etiquette, and human relations.
6. To introduce career possibilities and the avenues to advancement in a chosen field of business.<sup>2</sup>

In summary, in spite of the different names given to, and the differing areas of emphasis, the principal objective of the office practice course is to prepare students for general office work by "bridging the gap" between theoretical activities and real life work. The hope is that students trained in clerical skills and attitudes will be better able to adjust to office jobs than those who drift into these jobs without prior training.<sup>3</sup> To meet this primary

<sup>1</sup>See Appendix A for examples of literature and research containing lists of objectives.

<sup>2</sup>Donald Tate, op. cit., p. 50.

<sup>3</sup>"Illinois Curriculum Programs," Subject Field Series, Bulletin D-3 (Springfield: Office of the Superintendent of Public Instruction, 1963), pp. 134-35.

objective, the student's needs for required abilities, skills, knowledges, and understanding of office practice and procedure to be developed, and an introduction to work experience, if possible, must be satisfied.

### III. SIMULATION AND ITS CONTRIBUTIONS TO THE OFFICE PRACTICE COURSE

Research studies and literature on simulation as an educational instructional technique and its contribution to fulfill the goals of the office practice course were reviewed.

This section is divided into two parts. One part includes the nature, characteristics, purposes and uses, weaknesses and strengths, and implications of instructional simulation. The other part presents a compilation of studies, research and articles on the justification of the use of office simulation in the office practice course.

#### Instructional Simulation

Examination of research studies and related literature reveals an agreement that simulation is the representation of real life but not real life itself. Meir, et. al., presented Morgenthaler's definition of simulation as "to duplicate the essence of the system or activity without actually attaining reality itself;" simulation, according to them, is similar to the utilization of a model to represent the essential characteristics of a system or process under study.<sup>1</sup>

<sup>1</sup>Robert C. Meir, William T. Newell and Harold L. Pazer, Simulation in Business and Economics (New Jersey: Prentice-Hall, Inc., 1969), p. 2.

Ogunniyi's definition seems representative:

Educational simulation is defined to be any model, or process that is an abstraction of real life used for instruction to provide educational experiences that elicit life-like behavioral responses.<sup>1</sup>

Twelker (1968a), Greenlaw, et. al., and Meir, et. al., recognized the long history of simulation as an instructional technique in the military, scientific studies, engineering, government, and operational research. In Twelker's words:

Simulation has been used extensively for years . . . It is not really a radically new innovation which out-modes all others, but it does present another approach to instruction which hopefully can create a life-like environment for real life response on the part of the students.<sup>2</sup>

Characteristics of Instructional Simulation. Orcutt observed that the simulation of a social system concerns the setting up and operating of a model designed to represent those features of the system which are considered significant in regard to the simulation.<sup>3</sup> Its few major characteristics as compared to other training techniques can be summarized, according to Beck and Monroe, as follows:

<sup>1</sup>Omosho Ogunniyi, "The Methodology of Educational Simulation and Design of a Simulated Instructional Model for Occupational Education" (Doctor's dissertation, Michigan State University, 1969), p. 12.

<sup>2</sup>Paul A. Twelker, "Simulation, What Is It? Why Is It?" Paper presented at Association for Supervision and Curriculum Development Conference, San Diego, California, April 1968.

<sup>3</sup>Guy H. Orcutt, "Views on Simulation and Models of Social Systems," in Austin C. Hoggatt and Frederick E. Balderston (Editors), Symposium on Simulation Models: Methodology and Applications to the Behavioral Sciences (Cincinnati: South-Western Publishing Company, 1963), p. 221.

1. The simulation starts with an analogous situation of the real life.
2. It provides low-risk factors and inputs.
3. It feeds back consequences.
4. It is duplicable.<sup>1</sup>

Also, being a representation of life, but not life itself with all the predictable and unpredictable factors, the simulation technique offers a unique "fail safe" characteristic, as the inputs from the simulated environment and results of knowledge of performance provided to students are under control of the learner.<sup>2</sup> It provides a means to explore the complexity of society in relative security, small segments at a time, to improve the learner's subsequent performance and understanding of the system.<sup>3</sup>

It further extends the natural mode of learning by doing; the approach constituted by the simulation technique emphasizes the point that people do not learn by being taught, they learn by experiencing the consequences of their actions.<sup>4</sup>

<sup>1</sup>Isabel Beck and Bruce Monroe, "Some Dimensions of Simulation," a report presented at the 1969 American Educational Research Meeting, Los Angeles, California, 1969, p. 2.

<sup>2</sup>Lawrence T. Alexander and others, "A Demonstration of the Use of Simulation in the Training of School Administrators" (New York: City University of New York, Division of Teacher Education, 1967), p. 6.

<sup>3</sup>James S. Coleman, "The Role of Modern Technology in Relation to Simulation and Game for Learning," (Washington, D.C.: Academy for Education Development, Inc., 1970), p. 9.

<sup>4</sup>James S. Coleman, "Learning Through Games," National Education Association Journal, January 1967, pp. 69-70.

Most researchers and authors agree on one point, which is that the major trait of simulation as an instructional technique is the considerable amount of involvement and motivation on the part of the learners.

The list of characteristics of instructional objectives is not exhaustive, but it has been discussed and reviewed by many researchers of authority. The above are the major characteristics representative of the simulation technique.

Purposes and Uses of Simulation. Perhaps the importance of simulation is as Gagne stated: "The purposes of simulation are of utmost importance, not only in determining the ways in which simulators are used, but also in establishing the criteria for their design."<sup>1</sup> To him the success and effectiveness of a simulation lie in the identification of the purpose or purposes prior to designing and using the model. He specified the three purposes for which the simulation technique is needed as training, assessment and development.<sup>2</sup>

Twelker (1968b) recognized that when a simulation is used in an instructional setting, the specific purposes then are to present information, to elicit responses and to assess performance.<sup>3</sup> Once

<sup>1</sup>Robert Gagne, "Simulators," in R. Glaser, Training Research and Education (New York: John Wiley and Sons, Inc., 1965), p. 227.

<sup>2</sup>ibid., p. 232.

<sup>3</sup>Paul A. Twelker, "Simulation: An Overview" (Monmouth, Oregon: Teaching Research Division, Oregon State System of Higher Education, July 1968b), p. 6.



the purposes are defined and decided upon, he observed, it would be easier for the designer to make his choice of what elements of real life to include or omit and what task-relevant elements are to be represented.<sup>1</sup> Task-relevant elements are those that are essential for the learning of a particular task, and according to Twelker (1968b), the determination of task-relevant elements depend much on the instructional objectives.<sup>2</sup>

The primary concern of this study is the utilization of the simulation technique for a vocational course; and as the goals of any program of vocational education are to develop skills, concepts, and insight needed on the job, the aim must be the maximum transfer of learning about the future real job situation. Here arises the question of degree of simulation to maximize the transfer of learning.

Gagne, after reviewing various studies, stated that while the departures from physical similarity can produce a high degree of transfer from a simulated to actual task, the degree of simulation is better perceived as "psychological simulation," defined in terms of the simulated to the real life situation.<sup>3</sup> Twelker (1968c) too contended that many studies have presented evidence to indicate that

<sup>1</sup>Ibid., p. 11.

<sup>2</sup>Ibid., p. 11.

<sup>3</sup>Gagne, op. cit., p. 232.

for complex skills, greater transfer is produced by a systematic arrangement of practice rather than by high fidelity simulation.<sup>1</sup>

Twelker (1967)<sup>2</sup> and Briggs and Naylor<sup>3</sup> agreed that transfer of learning is more likely to occur if the simulated experiences used in training are relevant to the real world and are meaningful in terms of goals. Twelker (1967) noticed considerable instances in the use of simulation to prepare student teachers.

Stated another way, fidelity of simulation concerns two aspects: physical and psychological. Ogunniyi pointed out:

Physical fidelity is the representation of essential elements of real life model which accurately replicate the important characteristic of the real-life being simulated. It is the approximation of the real life model through a process of selective omission of irrelevant elements and the inclusion of relevant elements that provide stimulus equivalence that elicits life-like responses transferable to real life. Psychological fidelity is a mental process which leaves a self-critical individual in a feeling of "realness" whether or not there is a physical similarity between the real-life model and the simulation model. Fidelity of simulation is not attained by physical duplication or the model alone, but also by verisimilitude, a psychological state which gives an appearance of reality.<sup>4</sup>

<sup>1</sup>Paul A. Twelker, "Simulation: Status of the Field," Paper presented at the Conference sponsored by the Commission of Educational Media for ASCD, NEA (Boston, October 1968c), p. 13.

<sup>2</sup>Paul A. Twelker, "Classroom Simulation and Teacher Preparation," School Review, LXXV, 1967, pp. 197-204.

<sup>3</sup>G. E. Briggs and J. C. Naylor, "Team Versus Individual Training, Training Task Fidelity, and Task Organization Effects of Transfer Performance by Three-Man Team," Journal of Applied Psychology, XLIX, 1965, pp. 387-392.

<sup>4</sup>Ogunniyi, op. cit., p. 92.

The appropriateness of the use of the simulation technique for education and training was discussed by Twelker (1969b)<sup>1</sup> and Alexander and others.<sup>2</sup> The following list of situations was derived from their writings:

1. When affective behavior is involved.
2. When affective and cognitive behavior are combined.
3. When the referent situation is either dangerous or costly as a training medium.
4. When there are no rules responding to the situation or when the rules are not precise but expressed as general principles requiring interpretations and selective applications.
5. When interactions between a man and a machine, or a man and his environment, or among a group, or some combination of these, are necessary.
6. When maximum transfer of textbook knowledge to class skills is to be achieved.
7. When considerable involvement and motivation on the part of the learners is desirable.

Strengths and Weaknesses of Instructional Simulation. Among the many researchers who have noted the advantages and limitations of instructional simulation are Dawson; Immegarth; Wynn; Barrett;

<sup>1</sup>Paul A. Twelker and J. Crawford, "The Design of Instructional Simulation System," in P. A. Twelker (ed) Instructional Simulation: A Research Development and Dissemination Activity (Monmouth, Oregon: Oregon State System of Higher Education, February, 1969), pp. 88-90.

<sup>2</sup>Alexander, et. al., op. cit., p. 6.

Greenlaw, et. al.; Twelker (1969b); Wigderson; Beck and Monroe; Demak and Dworkin; McGeehee and Thayer; Boocock; Cherryholmes; Hanson; and Archer. Briefly stated, strengths and weaknesses of instructional simulation, derived from the studies of the above authors, as it stands by itself or in comparison with some other techniques are as follows:

Strengths.

1. Simulation particularizes interests and motivation in learning and gives students the experience of learning by doing.
2. Simulation permits "constructive failure" where the students profit from mistakes which may be disastrous on the job.
3. Simulation permits clinical examination and comparison of on-the-job behavior in identical situations.
4. Simulation provides opportunities to view the whole picture as well as each problem with broad context.
5. Simulation gives the opportunity to see the object lesson as a medium of instruction which the learner may find useful in his own situation.
6. Simulation is as effective with slow learners as it is with fast ones.
7. Simulation can provide experience in a wider range of educational objectives, i.e. affective as well as cognitive, process as well as content oriented.
8. Simulation provides evaluation by self and by instructors, as well as by system criteria.

9. Simulation contains built-in time and complexity control factors where practices in decision making at a reasonable level can be made in a timeless environment.

10. Simulation bridges school subject disciplines and gives the students an integrated experience.

Weaknesses.

1. It is difficult to design simulation with adequate degree of fidelity and estimated transfer of learning.

2. Simulation depends heavily on the ability of the instructor using it.

3. Simulation may encourage conformist and acceptant rather than inquisitive attitudes on the part of the students.

4. Simulation needs considerable uninterrupted time for comprehension of background materials and operation of the model.

5. Simulation may lend itself to provide opportunities for learners to cope with executive or administration problems rather than policy or issue problems.

6. Simulation games often introduce considerable change in physical movements, noise levels, classroom, and teacher's role that are highly suspected by some teachers.

7. Simulation is often hard to evaluate because of the human processes that are modeled.

Cost factors in simulation can be either a strength or weakness depending upon with which technique of teaching simulation is compared. More often than not, it is expensive to produce in regard to

the labor used to create an effective operable model, and in regard to the fact that it can become obsolete.

#### Justification of Office Simulation

As stated, office practice aims at bridging the gap between the school and the world of work. Whether or not this vocational oriented course serves its purposes depends heavily on how the course is taught to students of various ability levels.

There seems to be a need in high school business education programs today, as McNair and West pointed out:

There exists today in high school business education a need for a means of involving the student in a situation that will demand behavior consistent with the future for which the student is being prepared. At the same time, there is a need for providing means for both slow and fast students to expand the limits of the learning experience to fit their abilities.<sup>1</sup>

It has been well demonstrated by psychologists that learning transfer occurs when the learner perceives a relationship between a given situation and one which he has experienced previously.<sup>2</sup> Since office simulation presents representation of real office situations, the probability of desired transfer would seem much more likely than with conventional methods and materials.

<sup>1</sup>Douglas McNair and Alfred P. West, Jr., "Development and Testing of a High School Business Game, Final Report" (Washington, D.C.: Bureau of Research, Office of Education (DHEW), August, 1970), p. 1.

<sup>2</sup>Lee C. Deighton (Editor-in-Chief), The Encyclopedia of Education (U.S.A.: The MacMillan Company and The Free Press, 1970), pp. 256-261.

Crawford, in discussing the dimensions of simulation, referred to it as a means by which the student is brought into contact with his future job and occupational environment.<sup>1</sup>

Of a more important nature is the result of this contact between the learner and the future occupational environment. As Warenhorst stated, ". . . they (students) would not only be exposed to some of the realities of the future, but also learn how to deal with them."<sup>2</sup>

It is generally agreed among business educators that the office simulation technique in the classroom seems to be one of the few good approaches to effectively give working experience to the students of the office practice course. By simulating a business environment, the students are given chances to apply and experiment with their classroom and textbook knowledge,<sup>3</sup> because office simulation is designed to provide real life office situations with its "constraints and stresses" to the students under simulated conditions.<sup>4</sup>

More essentially, the technique introduces vocational awareness in the students, Roberts and Keahey asserted:

<sup>1</sup>Meredith P. Crawford, "Dimensions of Simulation," American Psychologist, XXI, 1966, pp. 788-795.

<sup>2</sup>Barbara Warenhorst, "Information Regarding the Use of Career Game in the Palo Alto Unified School District Guidance Program" (Palo Alto, California: Palo Alto Unified School District, January 1971), p. 2.

<sup>3</sup>McNair and West, op. cit., p. 2.

<sup>4</sup>Garth A. Hanson, "Practicum for Simulated Methods in Office Occupation Education, Final Report" (Logan, Utah: Utah State University, June 1969), p. 16.

By providing the student with a chance to experience concepts of importance in the economic world, the student has an opportunity to experience how his own personality may react. The gaming approach emphasizes the responsibility of the individual in constructing his own value and moral system in relationship to his environment.<sup>1</sup>

Radding agreed with the above concept and believed job stability may be improved because the student will be more selective in his acceptance for a permanent and satisfactory job after the experience in office simulation.<sup>2</sup>

Some of the special features of office simulation that make the technique appropriate and realistic in obtaining the objectives of the office practice course described by Hanson<sup>3</sup>, Archer<sup>4</sup>, and Blackstone<sup>5</sup> are summarized as follows:

1. Office simulation provides students with an opportunity to gain work experience in an office but off the job.
2. The teacher maintains control of the simulated office at all times and the procedures can be analyzed, changed, and rerun for effectiveness.

<sup>1</sup>Tommy L. Roberts and Scott P. Keahey, "Gaming for Vocational Awareness: A System Approach, The Bartlesville System." (Stillwater, Oklahoma: Oklahoma State University, 1970), p. 7.

<sup>2</sup>Thelma G. Radding, "Preparing Office Clerical Workers through the Office Practice Laboratory," Business Education Forum, February, 1967, pp. 14-15.

<sup>3</sup>Hanson, op. cit., pp. 11-16.

<sup>4</sup>Fred C. Archer, "Get Started on Simulated Experience," Business Education World, November 1969, p. 9.

<sup>5</sup>Bruce I. Blackstone, "Vocational Office Education," Business Education World, January-February 1970, p. 28.



3. The student can see the total office work flow and procedural relationship in an office because he is personally involved in the process.

4. The student can work as slowly or as swiftly as his capabilities permit.

5. The student learns responsibility and the concept of accountability for the job done by him.

6. The student can make mistakes and learn correct procedure again through the errors made without having to suffer financially or physically.

7. The teacher can control both time and complexity of experience in the simulated office program.

8. The office simulation model provides a terminal practical application of the knowledges, skills, procedures and understanding learned from textbooks.

To sum up, some educators and researchers feel that simulation in education is a simplified representation of real life; its utilization facilitates efficient learning and makes possible applicable life experience. It exposes learners to the experience with controls. Office simulation is generally agreed to realistically meet the objectives of the office practice course. Special features pertaining to the appropriateness of the technique were listed.

#### IV. CRITERIA FOR DESIGNING AN EDUCATIONAL SIMULATION

This section presents the synthesis of literature about the criteria for designing an educational simulation with specific implication for office model.

Designing a simulation is not an easy task because it is very time consuming and requires tremendous effort on the part of the designer. One valid reason for encouraging the construction of simulation was stated by Greenlaw, et. al.:

Game design itself is an extremely valuable educational experience for the instructor or trainer. The individual who embarks upon the design of a game will be compelled to consider closely not only what he is attempting to teach but also his whole range of concepts, assumptions and tenets concerning the subject matter.<sup>1</sup>

In the United States, there are commercial office simulation packages which have proved workable and rather successful in the high schools using them. Three of them are Lester-Hill Corporation, published by Gregg Division of McGraw-Hill Book Company; Simulated Automobile Insurance, put forth by the Washington Insurance Council; and Safeco Insurance, by Safeco Company.

In some schools teachers have devised and operated their own office simulation.<sup>2</sup> The critical problems for designing an educational

<sup>1</sup>Paul S. Greenlaw, Lowell W. Herron, and Richard H. Rawdon, Business Simulation in Industrial and University Education (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1962), p. 69.

<sup>2</sup>See Appendix B for examples of literature concerning teachers' designs and operations of their own office simulations.

simulation have been discussed by researchers, teachers and educators from both theoretical and practical points of view.

Twelker's research report<sup>1</sup> and Ogunniyi's synthesis study<sup>2</sup> revealed the five basic elements that should be incorporated into an educational simulation design:

1. A stimulus situation.
2. A response situation.
3. A consequence situation representing the interaction of stimulus responses.
4. A feedback sequence.
5. A control.

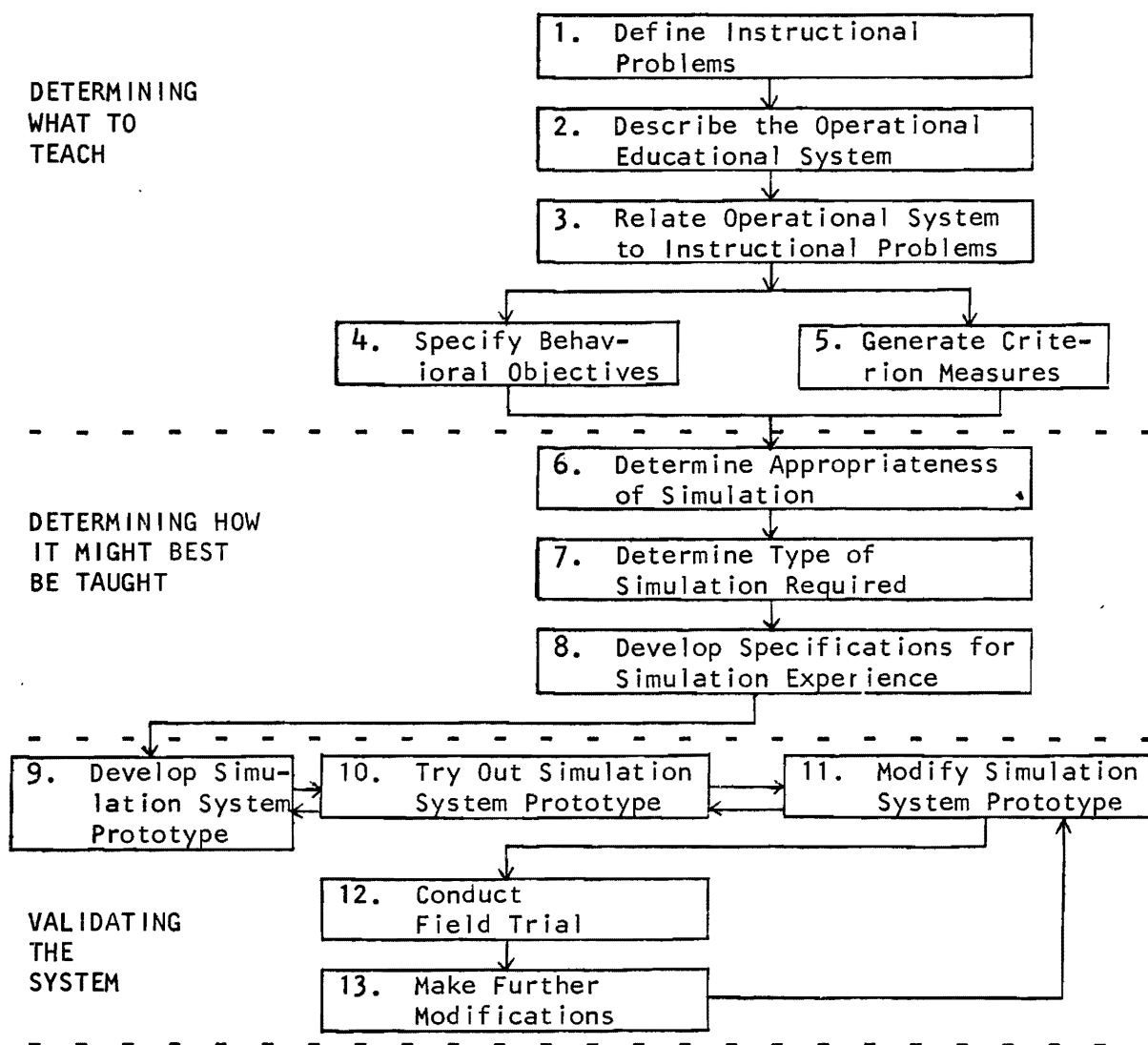
The steps in designing a simulation can be carried out after careful design. Twelker's thirteen specific steps (see Table 1) for designing an instructional simulation seem to be very well covered among the related literature.

The review of literature reveals general agreement among researchers concerning an approach of developing the instructional simulation. Greenlaw, et. al., Twelker (1969a), Demak and Dworkin, McNair and West, Roberts and Keahey, Hanson, Crawford, and Abt have all discussed the development of instructional simulation. Their approaches are different, but the main objectives are the same for achieving a suitably operational model.

<sup>1</sup>Twelker, "Simulation: An Overview," op. cit., p. 12.

<sup>2</sup>Ogunniyi, op. cit., p. 107.

TABLE I  
STEPS IN THE DESIGN OF AN INSTRUCTIONAL  
SIMULATION SYSTEM



Source: Paul A. Twelker, "Designing Simulation Systems." Paper presented at the annual meeting of the American Educational Research Association, Los Angeles, California, February 1969.

Following are integrative steps for designing an instructional simulation, with special implication about office simulation:

1. Setting Up Objectives. An important stage of the development of the simulation model is, as agreed by the above researchers, the identification of objectives and goals of the simulation. In setting up the objectives for the simulation model, the learning objectives of the students must be taken into account. As Jones expressed, "Simulated work experience . . . must have certain characteristics that lead to the accomplishment of learning objectives of students."<sup>1</sup>

In relating the construction of the simulation model to its educational objectives, Twelker (1969a)<sup>2</sup> and Greenlaw, et. al.<sup>3</sup>, agreed that clearly defined consideration must be given to the following factors:

- (1) The target or training group.
- (2) The available resources, both human and others.
- (3) The instructional philosophy guiding the system and the designer.
- (4) The curriculum scheduling, materials, and time limits.
- (5) The financial and physical resources available.
- (6) The administrative management.

<sup>1</sup>Adeline D. Jones, "The Enigmatic Intensive Office Laboratory," The Balance Sheet, April 1968, pp. 344-46, 384.

<sup>2</sup>Twelker (1969a), op. cit.

<sup>3</sup>Greenlaw, et. al., op. cit., pp. 72-75.

2. Data Collection and System Analysis. The next step after the educational objectives have been specified is the gathering of information to form the structure of the simulation.<sup>1</sup> As office simulation is a representation of a true office in operation, it is necessary for the designer to conduct research and make use of real world data to the extent that the game is to be a replica of the actions of that particular company or office.<sup>2</sup>

In regard to the kind of information to collect for an office simulation, Hanson suggests the following items<sup>3</sup>:

- (1) A true office in action.
- (2) The types of work the designer desires the students to do.
- (3) Kind of jobs done at each station.
- (4) The work flow.
- (5) The procedure involved in carrying out the job.
- (6) The equipment used to complete the work.

The collection of data should be the result of a careful system analysis which, according to Abt, "consist of identifying all the major decision-making entities, their materials, and informational inputs and outputs, and the resources and information exchanged by these decision-making elements."<sup>4</sup> He further stated that a sequential

<sup>1</sup>Greenlaw, et. al., op. cit., pp. 72-75.

<sup>2</sup>Ibid., pp. 66-67.

<sup>3</sup>Hanson, op. cit., p. 22.

<sup>4</sup>Clark C. Abt, "Education is Child's Play," in Wener Z. Hirsh (ed), Inventing Education for the Future (San Francisco: Chandler Publishing Co., 1967), p. 151.

analysis is subsequently made to determine the sequence and rate of flow of work among the identified work stations.<sup>1</sup>

It is suggested by experienced designers that a close contact with the business community and businessmen would facilitate this task of analyzing and collecting data for the designer. But there are problems to encounter in this process that the designer needs to expect and overcome<sup>2</sup>:

- (1) Problems of communication.
- (2) Problems of unavailability of certain kinds of data.
- (3) Problems of reluctance on the part of the business community to reveal certain kinds of data.

3. Development of Basic Office Simulation Structure. In building the basic structure of the simulation, the designer needs to make decisions upon the following points as discussed by Greenlaw, et. al.:

1. Basic features and characteristics of the game.
2. The specific elements to be included therein.
3. The rules of play.
4. The relationship to be established between the various simulation elements chosen for inclusion.<sup>3</sup>

The problem, researchers agree, is how much realism to include in the simulation. The high school students, for whom the simulation is designed, must see the relevance in what they learn as Abt stated:

<sup>1</sup>Ibid., pp. 123-155.

<sup>2</sup>Greenlaw, et. al., op. cit., pp. 66-67.

<sup>3</sup>Ibid., p. 77.

Students must believe, and believe correctly, that what they learn will be useful to them as adults. Utility here should be defined broadly, to include not only the practical career guidance and training, but also the appreciation of general intellectual and social values. Students should have reason to believe that what they learn will help them to understand, predict, and control to a socially acceptable degree their own future environment, as well as their own actions in it.<sup>1</sup>

Therefore, the model, as a representation of life but not life itself, has to be the best fitting one built to adequately represent the relevant aspects of reality.<sup>2</sup> The degree of complexity and realism to be incorporated in the game depends, according to Greenlaw, et. al., on the degree that the designer desires, and also the degree that he can obtain through the resources made available to him<sup>3</sup>. However, the most important factors to consider should be the needs of the students, and the objectives established for the course. In choosing a business to simulate, Funk suggested the designer should consider a company operation that blends with course objectives in regard to office skills, knowledges, and attitudes that he helps to build.<sup>4</sup>

Once the basic framework is set, the roles and interactions of individuals or groups are identified in regard to what is to be done,

<sup>1</sup>Abt, op. cit., p. 134.

<sup>2</sup>Twelker (1969a), op. cit., p. 7.

<sup>3</sup>Greenlaw, et. al., op. cit., p. 78.

<sup>4</sup>Beverly Funk, "A Blueprint for Successful Simulation," Business Education Forum, February 1970, pp. 21-22.



by whom, and when, as well as the actions and provisions of consequences of these actions.<sup>1</sup> Hanson and other business educators recommended the use of flow diagrams to establish and relate routines among positions in the office simulation.<sup>2</sup>

4. Development of the Simulation Mechanics. Special attention must be given at this stage in the development of the simulation model. The primary tasks here are to prepare the job description manuals, the basic script, and the simulation forms to be used.

For the simulation to function smoothly and easily, the job description manuals should explain the operational procedures for each function in detail and the script should be clearly related and complete. Twelker (1969b) remarked: "The main task is that of translating instructional blueprints into prototype. The more complete and thought out the blueprint, the faster and easier the development."<sup>3</sup>

5. Tryout Simulation System. Demak and Dworkin, Twelker (1969b), and Greenlaw, et. al., agreed that it is mandatory to experiment with the simulation system before using it to insure its validity and adequacy.

<sup>1</sup>Leonard Demak and Leo Dworkin, "Games and Simulations: An Approach to Meaning through Participation. Ideas in Motion." Detroit, Michigan: Madonna College, May, 1969.

<sup>2</sup>Hanson, op. cit., p. 23.

<sup>3</sup>Paul A. Twelker and Jack Crawford, "The Design of Instructional Simulation Systems," in Paul A. Twelker, Instructional Simulation: A R/D and Dissemination Activity, (Monmouth, Oregon: Oregon System of Higher Education (Teaching Research Division), February 1969), p. 9.

The designer can evaluate the system, McNair and West observed, with respect to the following questions:

1. Stability of environment: Does the game remain stable in the face of inappropriate decisions, or does it degenerate into a series of extremes?
2. Observable response: Does the environment respond to particular decisions in a manner consistent with accepted economic principles?
3. Unrealistic tactics: Are there opportunities for gaming against the programmed environment in terms of making irrational decisions to exploit model imperfections?
4. Decision difficulty: Is it possible for high school level teams to arrive at justifiable decisions in a reasonable amount of time?<sup>1</sup>

If the system is able to stand up against the above evaluation criteria, then it can be used; if not, it has to go through the next step.

6. Modify and/or Redesign the Simulation System. Many test plays of the simulation game will bring out the distortions and weaknesses that are to be corrected according to the objectives and limits of the designer and the target groups. If the simulation does not function at all, which may well be the case when wrong assumptions are made about the model or when inputs of the simulation are invalid and inadequate,<sup>2</sup> then new criteria and objectives have to be adopted for redesigning it.

In any case, the simulation model has to be reviewed from time to time to keep it in line with the learning objectives of the subject it is supposed to simulate.

<sup>1</sup>McNair and West, op. cit., p. 7.

<sup>2</sup>Ogunniyi, op. cit., p. 148.

7. Establishment of Student Evaluation Procedures for an Office Simulation. Unlike the other simulation games, where the success of the participants is represented by gain or loss, profit or points or scores, etc., an office simulation does not give any quantitative result as a measurement of the performance of its participants.

Beck and Monroe suggested that "while the result in a competitive mode is norm-referenced, a criterion-referenced evaluation is also possible and may be the designer's choice."<sup>1</sup> These two approaches offer more of a qualitative rather than quantitative evaluation. The criterion-referenced approach is preferred because it is based on the occurrence of the desired responses, which are expressed in terms of degree of accuracy or the speed at which the function is performed or the behavior which is exhibited.<sup>2</sup>

It is important that the user of the simulation give students grades that indicate their employability and office potential.<sup>3</sup> Hanson<sup>4</sup> and Krawitz<sup>5</sup> recognized standards of evaluation in real business offices and suggested an evaluation process based on:

(1) Student evaluation of each position during each predetermined period.

<sup>1</sup>Beck and Monroe, op. cit., p. 5.

<sup>2</sup>Ogunniyi, op. cit., p. 145.

<sup>3</sup>Hanson, op. cit., p. 18.

<sup>4</sup>Ibid.

<sup>5</sup>Myron J. Krawitz, Lester-Hill Corporation Employer's Guide (New York: Gregg Division, McGraw-Hill Book Company, 1971), p. 49.

(2) Teacher evaluation of each position according to his opinion and observation (see Table II).

(3) The amount of work produced by the students in a pre-determined period.

In the area of evaluating students by assigning grades, Ogunniyi notes that the teacher should have absolute freedom; but he also has the professional obligation to ensure realistically defensible standards.<sup>1</sup> Ward Sybouts cautioned that though there are varied ways undertaken for evaluation, they have to be adequate if simulation can, at all, be justified as an instructional device.<sup>2</sup>

To sum up, in this section the theoretical process of designing an office simulation was discussed. The seven-step process contains:

1. Setting objectives.
2. Gathering information and collecting data.
3. Developing basic office simulation structure.
4. Developing the simulation mechanics.
5. Trying out the simulation system.
6. Modifying and/or redesigning the simulation system.
7. Establishing student evaluation procedures.

<sup>1</sup>Ogunniyi, op. cit., p. 147.

<sup>2</sup>Ward Sybouts, "Instructors Guide for Using Simulated Materials to Instruct School Administrators in the Area of Occupational Education." (Lincoln, Nebraska: Nebraska University, 1967), p. 21.

TABLE II

## EMPLOYEE EVALUATION FORM

Use this form to evaluate each employee. For each factor, select the group of words which best describes your judgment of the employee and circle the appropriate point value. When you have rated the employee on all factors, add the points and record the total score.

NAME \_\_\_\_\_ DATE \_\_\_\_\_ TOTAL POINTS \_\_\_\_\_

DEPARTMENT \_\_\_\_\_ JOB TITLE \_\_\_\_\_

<p>1-KNOWLEDGE OF JOB: Consider extent of person's knowledge of present job. Does he know what to do and why? Is he on the alert to increase his knowledge?</p>	<p>Has an exceptionally thorough knowledge of work 10</p>	<p>Has good knowledge of work 8</p>	<p>Requires considerable coaching 6</p>	<p>Has inadequate knowledge of work 4</p>
<p>2-QUALITY OF WORK: Consider ability to turn out work which meets high quality standards. Consider accuracy and neatness of work, regardless of volume. How frequent and serious are errors?</p>	<p>Highest quality 15</p>	<p>Well done 12</p>	<p>Passable 9</p>	<p>Poor 6</p>
<p>3-QUANTITY OF WORK: Consider the volume of work produced under normal conditions. Does he produce the volume he should on each task? Does he meet the quantity standards you have set for job?</p>	<p>Large volume 15</p>	<p>Good volume 12</p>	<p>Slightly below average volume 9</p>	<p>Unsatisfactory volume 6</p>

<p>4-ATTENDANCE AND PUNCTUALITY: Consider frequency of absences as well as lateness.</p>	<p>Record is excellent</p> <p>10</p>	<p>Occasionally absent or late</p> <p>8</p>	<p>Frequently absent or late</p> <p>6</p>	<p>Undependable; absent or late without notice</p> <p>4</p>
<p>5-ATTITUDE: Consider attitude toward work, company, and associates, and willingness to work with and for others. Does he "pitch in" when needed? Work smoothly with others? Make an effort to understand and observe company policies? Is he willing to do the less desirable tasks?</p>	<p>Unusually fine attitude</p> <p>10</p>	<p>Good attitude</p> <p>8</p>	<p>Passable</p> <p>6</p>	<p>Poor attitude</p> <p>4</p>
<p>6-JUDGMENT: Consider ability to make decisions and to utilize working time to best advantage. Does he plan logically to get work done in best possible manner? Are all facts obtained before making decisions? Does he know when to seek advice? In unusual situations, does he act wisely?</p>	<p>Justifies utmost confidence</p> <p>10</p>	<p>Applies himself well; needs little supervision</p> <p>8</p>	<p>Needs frequent checking</p> <p>6</p>	<p>Cannot be relied upon; needs constant supervision</p> <p>4</p>
<p>7-RELIABILITY: Consider ability to get work out under pressure, and to follow job through to completion. Can he be depended upon to complete assignments satisfactorily and on schedule? Is he willing to dig in to meet peak loads? Does he retain his composure under pressure?</p>	<p>Can always be counted upon</p> <p>15</p>	<p>Generally can be counted on</p> <p>12</p>	<p>Unpredictable under pressure</p> <p>9</p>	<p>"Cracks up" under pressure</p> <p>6</p>



## V. ORGANIZATION OF THE SIMULATED ENVIRONMENT

Literature reviewed shows that the area on the organization of the simulated environment is a yet-to-be-developed one. Most are fragmentary experiences pertaining to individual circumstances. A generalized view on the different aspects of the administration of the simulated environment is categorized as follows:

Course Prerequisites. As an approach to bring about the objectives of the office practice course (namely, proficiency in basic office skills, understanding, retaining the job, and facilitating adjustment to work), it is generally felt that the office simulation program should be used just before students enter their occupational life. Hanson<sup>1</sup>, Funk<sup>2</sup>, and Drenth<sup>3</sup> agreed that the student should have already acquired some basic skills--preferably:

1. One or two years of typing.
2. A year of general business.
3. An interest in improving business skills in a realistic office situation.
4. Senior standing.

Empirical data on the allocation of curriculum time strongly suggests a block time program for simulation--preferably two

<sup>1</sup>Hanson, op. cit., p. 12.

<sup>2</sup>Beverly M. Funk, "Model Office Program," The Secretary, October 1969, p. 32.

<sup>3</sup>J. A. Drenth, "Simulation = Stimulation; Realism = Relevance," The Balance Sheet, October 1966, p. 61.



uninterrupted hours.<sup>1</sup> "Having students for an extensive period of time is, in many ways, ideal for utilizing simulated materials,"<sup>2</sup> stated Sybouts.

Equipment and Facilities. The simulated office must provide a realistic atmosphere in the minds of the participating students,<sup>3</sup> so equipment and furniture should be representative of typical offices. However, office education is considered as one of the few fields of education where simulation can be used with very little change in the classroom. As Hanson pointed out, ". . . While it is possible to become very sophisticated and expensive, more than likely your classroom will serve simulation very adequately with the present facilities and equipment."<sup>4</sup>

Twelker (1968c) observed that low-fidelity, low-cost devices are highly satisfactory as long as the educational objective is consistent with the operations demanded by the simulation.<sup>5</sup>

The selection of equipment should be based on the studies of the simulated office and the employment needs of the community.

<sup>1</sup>Hanson, op. cit., p. 12.

<sup>2</sup>Sybouts, op. cit., p. 11.

<sup>3</sup>Arnold Jacobson and Bruno Zachary, "Office Occupation Laboratory," The Balance Sheet, January 1969, p. 209.

<sup>4</sup>Garth Hanson, "Let's Add the 'T' to Simulation," Journal of Business Education, March 1969, p. 247.

<sup>5</sup>Twelker (1968c), op. cit., p. 12.

Essentially, an office simulation needs the following furniture and equipment, suggested by Krawitz and Hanson:

1. Desks and chairs.
2. Typewriters.
3. Calculating machines.
4. Filing cabinets.
5. Home-made partitions.
6. Bulletin boards.

Individual experiences in many circumstances have shown that the teacher's and students' ingenuity can accommodate a simulation with limited resources. A few notable recommendations, by Krawitz, to overcome the lack of adequate equipment are<sup>1</sup>:

1. Loan or donation of needed equipment from local organizations, corporations, or businessmen.
2. Interoffice memoranda in place of telephones.
3. Used equipment and furniture from government surplus sale.

Class Sizes. Cohen recognized that the size and composition of the team is affected by the size of the class, and in turn affects the play. He contended that ". . . a large team produced lethargic play and affected the game adversely."<sup>2</sup> Hanson also suggested that the office be kept small.<sup>3</sup> With large classes the provision of a few

<sup>1</sup>Krawitz, op. cit., pp. 22-26.

<sup>2</sup>Bernard C. Cohen, "Political Gaming in the Classroom," Journal of Politics, XXIV, 1962, pp. 367-381.

<sup>3</sup>Hanson, "Practicum for Simulated Methods in Office Occupations Education," pp. 14-15.

complete offices within one classroom is possible, so that every student is given opportunity to perform the activities of each position through an appropriate rotation plan.<sup>1</sup>

Some commercial simulation packages, e.g., Lester-Hill Corporation, facilitate the problem of appropriate class size by providing different organizations for varying numbers of class members.

In short, there are no fixed rules for suitable class size. It is generally agreed that the simulated office should be kept small. A realistic rotation plan should be worked out to provide each student a chance to experience all the different positions designed for that model office.

Simulated Materials Needed. According to Hanson and Krawitz, the materials needed to provide a smooth running simulated office consist of:

1. Student's or employee's manuals where details of each position and related information of that particular position to others are described.
2. Instructor's or employer's manual which offers teachers administrative guidance and support.
3. Standard business forms used in the office simulation.
4. The basic office supplies such as reams of bond and white paper, paper clips, staplers, staples, typing erasers, correction fluid and paper, envelopes, boxes or trays for in- and out-baskets, etc.

<sup>1</sup>Hanson, "Practicum for Simulated Methods in Office Occupations Education," pp. 14-15.

Classroom Layout. Wood observed that the classroom layout for a simulated office should be varied from the conventional program. The main points to consider in preparing the classroom layout concern the function of work stations and the interrelationship of learning tasks. He argued:

Because of the interrelationship of student jobs in these simulated offices, consideration must be given to work flow. . . . Work must flow effectively across, around or through the facility. There must be a place where a job begins and where it is either mailed out or filed. There must be controls, which are provided by student supervisory positions.<sup>1</sup>

According to Wood, it is doubtful that there will be a clear-cut design for layout owing to the difference in preference, in available resources and equipment, and in local job standards. Therefore, flexibility should be maintained.

## VI. THE OPERATION OF OFFICE SIMULATION

The most important studies and literature reviewed were: a report from Hanson; studies from Meckley, Valentine and McCoy, and Alexander and others; and professional writings of Funk, Barger, Krawitz, and Burgess, Peterson, and Frantz.<sup>2</sup>

It is generally agreed that once the simulation has been selected and the simulated environment administered, the operational phases of the office simulation are:

<sup>1</sup>Merle W. Wood, "Facilities and Layout," in The Office Practice Program in Business Education, The EBTA Yearbook, XLIII (New Jersey: Somerset Press, 1969), p. 127.

<sup>2</sup>See the Bibliography for details about these authors and their works.

1. Pretesting. Pretests are given to determine the skills and knowledge that the students have before enrolling in the class. Students should be tested in typing, arithmetic, spelling, and alphabetizing. This phase of the operation of the office simulation is primary because the education, background and experience of the participating students should be considered in determining the orientation of the simulation<sup>1</sup> and the role assignments of the students.

2. Pre-Simulation. The students are given simulation orientation for their duties in performing their chosen or selected functions. Briefly described, the phase covers the following tasks:

a. Orientation discussion of the office simulation: (1) nature and objectives of the model; (2) facility arrangements; and (3) positions listed and briefly described.

Harry<sup>2</sup> suggested that the introduction of the game should be as brief as possible, conveying two main points--the purpose of the simulation game and the manner in which it is operated. He recommended the use of flow chart forms to describe the actual operation of the office simulated.

After the orientation, the student will receive a student manual that has instructions on specific transactions and operations of each position that he will play.

<sup>1</sup>Greenlaw, et. al., op. cit., pp. 73-74.

<sup>2</sup>Lindy Harry, "Using Simulation Games in the Classroom, Report No. 44" (Baltimore, Maryland: Center for the Study of Social Organization of Schools, John Hopkins University, June 1969), p. 6.

b. Intensive training session: The instructor should lay out ground rules as they refer to office procedures and disciplines and relevant game concepts. This involves office etiquette, dress standards, breaks, chain of command in communication, debriefing techniques, and any other ground rules concerning individual situations.

c. Interviews and role assignment: Each student must be interviewed for employment as in real life. The basis for role assignment is knowledge and skills as well as personal interests of the student.

d. Initial and abbreviated simulation warm-up: Students are exposed to the different business machines, business forms, and activities they are to deal with in the simulated office. More intensive treatment of each position is on a rotation plan for all the participants.

3. Full-Scale Simulation. The actual operation starts after careful preparation. At this point the teacher will step aside to let the students run the operation. The former will act primarily as a consultant or arbiter.

4. Participant Debriefing. Sometimes it is necessary to have open individual or group discussions to answer questions and solve problems, or to check how well the simulation operation went or why breakdown occurred. The teacher may call for debriefing sessions. The rules for debriefing sessions as suggested by Hanson are:

1. Call the entire group to be debriefed together. Sit so they can see each other.
2. Start by asking general questions, like: "How did things go today?"

3. The participants must do the thinking and talking.
4. Keep the group on the subject. Adjourn rather than let it degenerate into a chatter session.
5. Do not let the group blame other people for the weakness in procedure. Discuss these, but not blaming anyone for them.
6. Keep record of each debriefing. Have the secretary take the minutes.
7. Encourage participants to interact; the idea is to let them correct themselves.
8. Allow sufficient time for debriefing so that you don't have to stop just as the ideas are beginning to come out.
9. End on a pleasant note.<sup>1</sup> Try to smooth the rough spots out before you adjourn.

Also, according to Hanson, these debriefing sessions should occur as often as the teacher feels necessary. He agreed with Alexander and others that a post-simulation debriefing session is definitely necessary. The purpose of this post-simulation session, which is held after the actual run, is to allow the participants to ask further questions and to give their evaluation and appraisal in view of redesigning the model. This will serve, in Meckley's words, as a weight "to judge the efficacy of the simulation exercises as instructional materials, discover weak points in the materials and instructional techniques, and suggest ways to improve the simulation training exercise for future use."<sup>2</sup>

5. Post-Testing. Funk suggested the use of the post-test after having used a model office program in her high school. The scores

<sup>1</sup>Hanson, "Practicum for Simulated Methods in Office Occupations Education," pp. 19-20.

<sup>2</sup>Richard Meckley, Ivan E. Valentine, and Zane McCoy, "Simulation Training in Planning Vocational Education Programs and Facilities," Final Report. (Columbus, Ohio: Center for Vocational and Technical Education, The Ohio State University, April 1970), p. 150.

and class averages are graphed to inform the student of his improvement and employability potential.

To sum up, in order to insure a smooth running simulation, teachers as well as students should be adequately prepared. The schedule for the operation of the office simulation is composed of pretesting, pre-simulation, full-scale simulation, debriefing sessions and post-simulation testing. Recommendations and suggested activities for each of these phases were described in this section.

## VII. TEACHER'S ROLE PERCEIVED

Scholars in the field of simulation technique agree that the teacher's role is specified in certain areas of emphasis. The question, according to Long, is whether the teacher is willing to become vocationally oriented, people oriented, guidance oriented, and occupationally oriented by accepting changes concerning social conditions, education, his status, and his job.<sup>1</sup>

Jalowski noted that the teacher does not assume the role of a fact disseminator. He becomes, instead, a resource person who helps students work toward their goals.<sup>2</sup> Hanson emphasized that the teacher is the basic requirement in using simulation. He must have a real desire to use this method of teaching,<sup>3</sup> because there has been a

<sup>1</sup>Richard R. Long, "How Office Educators Meet the Challenge of Change," American Vocational Journal, November 1966, pp. 48-49.

<sup>2</sup>Toby D. Jalowsky, "The Model Office in an MDT Skill Center," Business Education Forum, October 1971, pp. 63-64.

<sup>3</sup>Hanson, "Let's Add the 'T' to Simulation," p. 247.



disinclination by teachers to use this technique. This attitude is the result of the de-emphasis of the starring role of the teacher,<sup>1</sup> as Wigderson observed.

Instructors using simulation will obviously have better results when they understand how to employ this technique and their role therein. The new role of the teacher is primarily that of guidance and supervision.<sup>2</sup> He specifically will try for the following steps, as suggested by Hanson and Stocker:

. . . (The teacher) is responsible for establishing the learning objective, the over-all task, the circumstances and the setting. He then, as it were, steps back to permit the group to act as a team to perform the task. At appropriate intervals, the teacher halts the procedures under way, and acts as a moderator while the group reviews its past activities, resolves its operating problems and devises new approaches.<sup>3</sup>

When the simulation is under way, the teacher will be there for assistance, but this has to be arranged in such a way that the student will have the opportunity to be responsible for the decision-making process. Radding suggested a line of authority to be established in an office simulation whereby the student is encouraged to seek help through a regular chain of command, from student employees to student supervisor, to student manager and then to the instructor.<sup>4</sup>

<sup>1</sup>Harry I. Wigderson, "The Name of the Game--Simulation," Research Brief No. 4 (Visalia, California: ADAPT, A PACE Supplementary Educational Center, June 7, 1968), p. 2.

<sup>2</sup>ibid., p. 1.

<sup>3</sup>Garth A. Hanson and Robert H. Stocker, "Mobile Simulation in Office Education," Business Education Forum, October 1968, p. 18.

<sup>4</sup>Radding, op. cit., p. 14.

The teacher's role encompasses, besides his classroom duties, the student's needs, environment and society. He must realize, as Mitchell reported, that the course content taught be what the student really needs. Mitchell further pointed out that the challenges of fast-changing society are met by the teacher's recognition of the student's need for flexibility and independence.<sup>1</sup>

Many authors agreed that, to be a successful simulation user, the teacher will be in the most favorable position if he has had working experience in the office and had contact with the business community. The most important point, in Cavuoti's word, is:

The major point, however, is not whether the business teacher actually participates in an office as a paid employee, but whether or not he keeps himself in constant contact with the business community.<sup>2</sup>

Hanson notes an advantage for the teacher of being in contact with the business community and familiar with the business opportunities and procedures is that he knows what kinds of office activities his students will be expected to perform in the job and what opportunity is available for the graduate.<sup>3</sup>

<sup>1</sup>William Mitchell, "Foundations of Office Education: Factors Inside and Outside the Field are Strengthening the Application of Office Education's Basic Tenets," American Vocational Journal, March 1968, pp. 28-30.

<sup>2</sup>Marilyn Cavuoti, "Beyond the Boundaries of the Blackboard," Business Education Forum, November 1970, pp. 42-43.

<sup>3</sup>Hanson, "Let's Add the 'T' to Simulation," p. 247.

The importance of office training for the teacher is discussed by Crawford and Kinzey as being:

1. An aid in acquiring certain office duties.
2. Refresher-training by actual realistic office assignment.
3. A guide to give insight to the needs of his future students in this area of specialization.
4. A total picture of office process and procedure rather than only a part of a particular process.

The effectiveness of any teaching technique is dependent on many factors--the ability and attitude of the teacher, the ability and interests of the student, the physical settings of the classroom, the facilities available, the administration, the faculty and the community. When the favorable aspects of the above factors are not met, it is then up to the teacher's initiative and creativity to make the technique usable and efficient. Shilt suggested an occupational mix, where the business and office educators can make contribution to other areas of vocational education by developing or constructing units of instruction in these areas. The example used is the incorporation of agriculture education and business and office education.<sup>2</sup>

Forte and Fuller related their experience as teachers in small high schools that could simulate an actual office situation in spite of stringent finances. In her terms, Fuller concludes:

<sup>1</sup>Don L. Crawford and Vera G. Kinzey, "Preparing Office Clerical Workers through Teaching Based on Business Experience," Business Education Forum, February 1967, p. 8.

<sup>2</sup>Bernard A. Shilt, "Office Education--A Partner in Vocational Education," American Vocational Journal, March 1965, p. 22.

The business world after graduation will not seem so new, so frustrating. The term "short-changed" can be only defined or determined in the light of the accomplishment of the students and the abilities of the teacher as they work together.<sup>1</sup>

To use Hanson's and Stocker's terms, "simulation on the road" works quite well for small high schools unable to obtain modern equipment and facilities for their own use. The project was set up by the collaboration of state officials, school administrators, business education teachers, and business education advisors from a related university and the community concerned. This mobile simulated office on a trailer, which goes to four small high schools in northern Utah and provides office practice students with real-life experiences, is another example of the teacher's desire and ability to carry out the simulation technique.<sup>2</sup>

To sum up, the new role for the teacher in office simulation is that of supervision, guidance, and innovation. The teacher must extend the limit of his classroom to reach the business community for the benefit of his students. He must be more vocationally oriented and able to accept the challenge of change in his status and image. He must have great desire to use the simulation technique to the point of using his creativity and ingenuity to overcome possible obstacles. He must be thoroughly prepared with the simulation before using the technique with the student, and must act mostly as a resource person.

<sup>1</sup>Marietta C. Fuller, "Small Schools can Initiate Vocational Business Education," Journal of Business Education, December 1970, pp. 96-97.

<sup>2</sup>Hanson and Stocker, op. cit., p. 17.

He must be capable of running the simulation and at the same time be flexible enough to cope with unexpected incidences of the game.

#### VIII. SUMMARY

The review of literature suggests and supports that the primary objective of the office practice course is to bridge the gap between school work and real life work. As a simplified model of real life, office simulation can facilitate the above task because the nature of the simulation technique allows applicable life experience with controls.

The seven steps to be used for designing a simulation model are applicable for office simulation. The organization of the simulated environment concerns proper course prerequisites, equipment and facilities, class sizes, materials and classroom layout. Most office simulation operations are composed of five phases: pre-testing, pre-simulation, full-scale simulation, participant debriefing, and post-testing. The functions of the teacher are to supervise, guide, and innovate. He must have the desire to use and become thoroughly familiar with the simulation technique to successfully use it.

## CHAPTER IV

### GUIDELINES FOR INTRODUCING THE OFFICE SIMULATION TECHNIQUE INTO VIETNAMESE PUBLIC EDUCATION

#### I. INTRODUCTION

Office practice instruction is new in the Vietnamese public educational institutions. Enrollments in the office practice course were only at the beginning stage during the period of time for which data for this study were collected. In the meantime, the office simulation technique is relatively new in the United States, where business education is far more advanced.

The accomplishments and ideas of educators concerning use of the office simulation technique to teach the office practice course have made it easier for newcomers in the field to try, to practice, and to further modify the innovative method according to their needs. Vietnamese business education teachers and school administrators may not have the time or the opportunity to obtain a comprehensive view of research findings and ideas in professional writings pertaining to the area of office simulation, even though they may know that new research findings and ideas can help improve the classroom practices. The writer's problem is to make the information accessible to the Vietnamese business educators in the most convenient and usable forms possible.

This study investigated the findings of research reports and ideas expressed in professional writings. The major outcome of this report is the synthesis of the research findings and ideas in professional writings. From data gathered and previously discussed, a set of general guidelines is presented. The guidelines are suggestions for users and designers of the office simulation technique. They describe activities, competencies, processes and courses of action that the users and designers should have.

The set of guidelines is planned for the Vietnamese business education teachers and those responsible for the preparation of the Vietnamese high school students who will be office workers after graduation. It is organized in the following four areas:

1. Design guidelines.
2. Administrative guidelines.
3. Operational guidelines.
4. Teacher education guidelines.

## II. GUIDELINES

### Design Guidelines

1. A determination of the basic educational objectives of the office simulation model should be made. Considerations should be given to the students, the occupational environment, the instructional philosophy, the resources available, and the existing curriculum.

2. A careful system analysis should precede the collection of data and gathering of information concerning the office to be simulated.

A close contact with the business community would reveal its demands and facilitate the task of analyzing and collecting data for the designer.

3. The kind of information and data to collect should include the type of jobs desired, the work stations, the informational inputs and outputs, the resources and information exchanged between these decision-making elements, the work flow, and the procedure involved in carrying out jobs.

4. A basic framework should be established in regard to the type of office to be simulated; the roles of individuals or groups should be identified as to what is to be done, by whom, and when; and actions and provisions for consequences of these actions should be determined.

5. Preparation of the job description manuals, the basic script, and the simulation forms should then be made. They should be clear, complete, detailed and well thought out.

6. The office simulation model should be tried out on a number of students to test its stability, difficulty, realism, and validity. If the model is able to stand up against the stated criteria, it is accepted. If not, it has to be redesigned or modified.

7. Test plays of the office simulation model should bring about limits and drawbacks that need to be corrected so that the system can function smoothly. If the simulation does not function at all, it may be the case of wrong assumptions or inadequate inputs. New criteria and objectives should be adopted for redesigning.

8. The students' evaluation procedures should be established as the office simulation model is developed. The criterion-referenced



approach is recommended. This is based on the occurrence of the desired responses expressed in terms of degree of accuracy or speed at which the function is performed or the behavior is exhibited.

9. The evaluation process should culminate in grades given to determine the employability potential of the student. The criteria that may be considered are: (a) student evaluation of each position during a predetermined period; (b) teacher evaluation of each position according to his opinions and observation; and (c) amount of student's production during a predetermined period.

#### Administrative Guidelines

1. Adequate administrative support should be asked of principals and fellow teachers to insure the cooperation necessary for a successful simulation program.

2. The student to be admitted to the office simulation program should have acquired basic skills in typing and general business and be interested in improving business skills in a realistic office situation.

3. The curriculum planning should permit a minimum block of two uninterrupted hours for the simulation program.

4. The simulated classroom should be arranged in an office-like manner. Equipment and furniture should be representative of typical offices.

5. In case of a tight budget policy, the facilities and equipment of the present classroom may serve simulation adequately.

Ingenuity and creativity on the part of the teacher and the students should be used to help overcome this administrative problem.

6. The size of the simulated office should be kept small. If the class happens to be large, a few complete offices within one classroom should be provided.

7. The simulation program should be used with the student as near his graduation as possible.

8. The teacher should work out a realistic rotation plan whereby each student will have an opportunity to experience the different positions designed in the simulated office.

9. To insure a smooth running operation, the quantity of standard business forms and basic office supplies should be more than sufficient.

10. Each student should be given a copy of the student's or employee's manual. The manual describes details of each position and the information of how each position is related to the others.

11. The classroom layout should be flexible, yet the principle of efficient work flow in the simulated office should be maintained.

#### Operational Guidelines

1. Pretests should be given to determine the skills and abilities of the student. Recommended testing areas are arithmetic, spelling, typing, and alphabetizing. The results of the pretest should be used as a basis for determining the orientation of the simulation and the role assignment of the student.

2. The simulation orientation should be brief and clear, conveying two main points: (a) the purpose of the office simulation, and (b) the manner in which it is operated.

3. The teacher should clearly define relevant concepts and ground rules as they refer to office procedures. This involves office etiquette, dress standards (if relevant), breaks, chain of command in communication, debriefing techniques and any other rules concerning the individual situation.

4. Each student should be interviewed for employment, and each should make a personal data sheet and a job application. The basis for role assignment should be knowledge, skill and personal interest of the student.

5. The student should be given an abbreviated exposure to the business machines, forms and activities to be used in the simulated office before the actual run.

6. The actual operation should be initiated only after careful preparation; when the full-scale simulation is in operation, the teacher should act only as a consultant.

7. Debriefing sessions should be organized as often as the teacher sees fit for discussing and solving problems and checking the progress of the simulation operation.

8. The debriefing session should be conducted with the whole class, be to the point, and have maximum student interactions. The main point is to let the students correct themselves.

9. A post-simulation debriefing should be held after the actual run to evaluate and appraise in view of redesigning, modifying or improving the model, and for the student to ask further questions.

10. Post-tests are suggested to determine the student improvement and employability potential.

### Teacher Education Guidelines

1. The teacher should become flexible and imaginative and be willing to accept change concerning social conditions, education, status and job.
2. The teacher should have a real desire to use the simulation method of teaching and accept his role of guide, supervisor and resource person.
3. The teacher should recognize and permit student freedom and flexibility to explore alternatives.
4. The teacher should have office working experience if possible and should be familiar or in contact with the business community.
5. The teacher should be thoroughly familiar with the simulation model before using the technique with the students.
6. The teacher should always maintain his professional quality and judgment.

### III. SUMMARY

This chapter presents a set of guidelines for designing and using office simulation to teach the office practice course. The guidelines are divided into four categories: (1) design guidelines, (2) administrative guidelines, (3) operational guidelines, and (4) teacher education guidelines.

These guidelines are the results of the findings of research reports and ideas, principles and opinions expressed in professional writings.

## CHAPTER V

### SUMMARY, OBSERVATIONS AND RECOMMENDATIONS

#### I. SUMMARY OF THE STUDY

This study was undertaken in an attempt to derive some general guidelines about introducing, designing and using the office simulation technique to teach the office practice course in the Vietnamese public comprehensive high schools.

The study was concerned specifically with the analysis and synthesis of the research findings and thoughts expressed in professional writings pertaining to the office simulation technique and related fields.

The procedure of research involved a review and analysis of literature concerning instructional simulation in office education and other fields. From the review of research findings and ideas presented in the professional literature from 1962 to 1971, six major areas were identified as necessary to build up a background for the development of guidelines in using the office simulation technique. These six major areas were: (1) the objectives of the office practice course; (2) the instructional simulation and its justifications; (3) design criteria for the office simulation; (4) the organization of simulated environment; (5) the operation of office simulation; and (6) the role of the teacher in the simulation program.

The synthesis of research findings and professional writings from 1962 to 1971 on the major problem areas, presented in Chapter III, provided the evidence from which general guidelines for using the office simulation technique were derived. The guidelines were developed with the purpose of introducing the office simulation technique to the Vietnamese business educators. The guidelines take into consideration the fact that the office education program in the Vietnamese high school curriculum is in the initial stage. These guidelines, found in Chapter IV, were related to: (1) the design criteria for the office simulation model; (2) the administrative process; (3) the operational criteria for the office simulation model; and (4) the role of the teacher in the simulation program.

The guidelines in each category attempt to identify and describe the process and activities from the very beginning step to the concluding one, even though it is not necessary to follow that exact order.

## II. GENERAL OBSERVATIONS

The general observations presented here are the result of the analysis and synthesis of research findings and professional writings from each of the major areas identified. They pertain to (1) the research reports and the professional writings, and (2) the synthesis of findings concerning the major areas under study.

### Nature of Research Findings and Professional Writings

Research indicated that office simulation is a new teaching method and requires the utilization of some new terminology. Studies

and professional literature analyzed and synthesized for the period 1962-1971 revealed that almost all were completed during the latter half of the period (1966-1971).

The 32 studies and reports used for this research were descriptive, historical and experimental in nature; however, the majority of them were historical and descriptive.

The volume of professional writings was much larger than that of research reports. There was repetition, and some were experiences and concepts which might or might not be used in another situation.

#### The Major Areas Under Study

The following major points are pertinent to the main areas under investigation:

1. The main objective of the office practice course in the United States during the period covered by this study has remained that of "bridging the gap" between the learning and doing. The objectives of the same course in the Vietnamese high schools, which is in its development stage, emphasize skill and ability development by the student.

2. The instructional simulation technique is increasing in popularity. However, there is no statistical research to support that it is a better technique.

3. There was a lack of general agreement on the evaluation of instructional simulation. Some include pretests and post-tests while others do not. The standards of evaluation are arbitrary and depend largely on the opinion of the teacher.

Y 4. The process of designing a successful simulation model is time-consuming and requires tremendous effort. The model is limited by the designer's ability, knowledge and sophistication as well as many external forces and intangible factors; however, it was generally agreed that modification and simplification can be made of existing simulation games.

5. The office simulation classroom may stimulate more students to enroll in office education classes.

6. The teacher assumes a different role than he previously had in the conventional classroom. He has to accept changes in his status, his relationship with the student, and his desires in experimenting with new ideas and methods in order to be successful with the simulation technique. The change in the teacher role in the classroom is considered one of the factors most difficult for the teacher to accept.

### III. RECOMMENDATIONS

In view of the data gathered and previously discussed and the telephone interviews concerning the present status of office education in Vietnam, it is recommended that:

1. Evaluation be made to determine whether or not office simulation systems can be used and should be used in the Vietnamese high schools.

2. A field experiment be conducted by the Research and Development Bureau of the Ministry of Education, or by the Business Education Department of the Faculty of Pedagogy in Saigon, Hue or



Cantho to test the workability of the guidelines.

3. Business teacher education in the educational institutions in Vietnam include the training to use, design and modify existing simulation games.

4. Commercial simulation games used in other advanced educational systems be acquired and made available to the Vietnamese business education teachers.

5. Workshops or practicum be organized under the auspices of the Department of Business Education, Faculty of Pedagogy in the University of Saigon in regard to introducing the simulation techniques and the changing status of teacher education for business teachers and school administrators.

6. Research and evaluation be done in initiating the mobile office education unit after the Utah example. The underlying reasons stem from the similarity in environment and financial conditions.

7. Further studies for appropriate approach to designing or using the office simulation in the local environment that can respond to and fit with the needs therein be carried out.

#### IV. CONCLUSION

The importance of progress is valuable but can not be over-emphasized at the expense of adequate preparation. In this spirit, the office simulation approach should be introduced to newly-established office education programs in the Vietnamese educational institutions. The fact that this technique may be useful and successful elsewhere does not purport the same result in the Vietnamese high

schools, but it does indicate a prospect of improvement. This study developed a set of guidelines for institution of office simulation in the Vietnamese educational system. The hope is for further research and experiments and reviews on the part of the Vietnamese business educators of new ideas and techniques introduced by educators of other advanced systems, whereby benefit will be acquired by the student and will allow them to be free and confident in the true meaning of education.

## SELECTED BIBLIOGRAPHY

### I. BOOKS

- Boocock, Sarane S. and E. O. Schild (eds.). Simulation Games in Learning. Beverly Hills, California: Sage Publications, Inc., 1968.
- Dawson, R. E. Simulation in Social Science: Readings. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1962.
- Deighton, Lee C. "Transfer of Training," The Encyclopedia of Education, 1970, Vol. 9, pp. 256-261.
- Eastern Business Teachers Association. Business Education for the Automated Office. Yearbook, Vol. LVII. Somerville, New Jersey: Somerset Press, 1964.
- \_\_\_\_\_. The Office Practice Program in Business Education. Yearbook, Vol. XLIII. Somerville, New Jersey: Somerset Press, 1969.
- Fattu, Nicholas A. and Stanley Elam. Simulation Models for Education. Fourth Annual Phi Delta Kappa Symposium on Education Research. Bloomington: Phi Delta Kappa, 1965.
- Glaser, Robert (ed.). Training Research and Education. New York: John Wiley and Sons, Inc., 1965.
- Graham, Robert G. and Clifford F. Gray. Business Games Handbook. U.S.A.: American Management Association, Inc., 1969.
- Greenlaw, P. S., Lowell W. Herron and Richard H. Rawdon. Business Simulation in Industrial and University Education. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1962.
- Guetzkow, H. Simulation in Social Science: Readings. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1962.
- Hirsch, Werner Z. (ed.). Inventing Education for the Future. San Francisco: Chandler Publishing Company, 1967.
- Hoggatt, Austin C. and Frederick E. Balderston (eds.). Symposium on Simulation Models: Methodology and Applications to the Behavioral Sciences. Cincinnati: South-Western Publishing Company, 1963.

- Krawitz, Myron J. Lester-Hill Corporation--Employee's Guide.  
New York: Gregg Division, McGraw-Hill Book Company, 1971.
- \_\_\_\_\_. Lester-Hill Corporation--Employer's Guide.  
New York: Gregg Division, McGraw-Hill Book Company, 1971.
- McGehee, William and Paul W. Thayer. Business Games - Training in Business and Industry. New York: John Wiley and Sons, 1961.
- McKenney, James L. Simulation Gaming for Management Development.  
Boston: Harvard University, 1967.
- Meier, Robert C., William T. Newell and Harold L. Pazer. Simulation in Business and Economics. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1969.

## II. RESEARCH STUDIES AND REPORTS

- Alexander, Lawrence, and others. "A Demonstration of the Use of Simulation in the Training of School Administrators."  
New York: Division of Teacher Education, City University of New York, July 1967 (microfiche).
- Anderson, Arlyn N. "A Pilot Study to Determine the Characteristics and Acceptance of a Mobile Office Education Classroom to Serve Small High Schools in Utah." Master's thesis, Utah State University, 1968.
- Beck, Isabel and Bruce Monroe. "Some Dimensions of Simulation."  
Paper presented at the 1969 American Educational Research Association meeting, Los Angeles, California, 1969 (microfiche).
- Berry, Doris Anita. "The Role of Office Practice Instruction in the Training for General Office Assignments." Doctor's dissertation, Indiana University, 1963.
- Boocock, Sarane and others. "Simulation Games and Control Beliefs, Final Report." Baltimore, Maryland: John Hopkins University, December 1967.
- Chuang, Ying C. "Simulation Model and Educational Research."  
New York: Center for Urban Education, February 1971 (microfiche).
- Coleman, James S. "The Role of Modern Technology in Relation to Simulation and Games for Learning." Washington, D. C.: Academy for Educational Development, Inc., 1970 (microfiche).

- Crawford, M. P. "Research and Development in Training and Education." Professional paper 18-67. Alexandria, Virginia: The George Washington University, Human Resource Office, April 1967.
- Crawford, Meredith P. "Simulation in Training and Education." Alexandria, Virginia: Human Resources Research Office, July 1967.
- Culbertson, Jack A. "Revising and Updating the Jefferson Township Simulation Materials. Final Report." Columbus, Ohio: University Council for Educational Administration, December 1967.
- Demak, Leonard S. and Leo Dworkin. "Games and Simulations: An Approach to Meaning Through Participation. Ideas in Motion." Detroit, Michigan: Wayne County Intermediate School District, Madonna College, May 1969 (microfiche).
- "The Development and Evaluation of Reality-Based Simulation Materials for the Training of Special Education Administrators in State Departments of Education." Syracuse University, New York: Division of Special Education and Rehabilitation, December 1970 (microfiche).
- Hanson, Garth A. "Practicum for Simulated Methods in Office Occupation Education. Final Report." Logan: Department of Business Education and Office Administration, Utah State University, June 1969 (microfiche).
- Harry, Lindy. "Using Simulation Games in the Classroom. Report No. 44." Baltimore, Maryland: Center for the Study of Social Organization of Schools, John Hopkins University, June 1969 (microfiche).
- Livingston, Samuel A. "Two Types of Learning in a Business Simulation." Baltimore, Maryland: Center for the Study of Social Organization of Schools, John Hopkins University, June 1971 (microfiche).
- McNair, Douglas D. and Alfred P. West, Jr. "Development and Testing of a High School Business Game. Final Report." Department of Health, Education and Welfare, Office of Education: Bureau of Research, August 1970 (microfiche).
- Meckley, Richard F., Ivan E. Valentine and Zane McCoy. "Simulation Training in Planning Vocational Education Programs and Facilities. Final Report." Columbus, Ohio: Center for Vocational and Technical Education, Ohio State University, April 1970 (microfiche).

- National Institute of Mental Health (DHEW). "Training Methodology, Part 3: Instructional Methods and Techniques; An Annotated Bibliography." Bethesda, Maryland: National Institute of Mental Health, 1968 (microfiche).
- Ogunniyi, Omotosho. "The Methodology of Educational Simulation and Design of a Simulated Instructional Model for Occupational Education." Doctor's dissertation, Michigan State University, 1969.
- Prior, Aurelia LouElma. "Organization and Operation of Clerical and Secretarial Laboratories in Iowa Secondary Schools." Master's thesis, State College of Iowa, 1964.
- Roberts, Tommy L. and Scott P. Keahey. "Gaming for Vocational Awareness; A System Approach. The Bartlesville System." Stillwater, Oklahoma: Bartlesville Public Schools, Oklahoma State University, 1970 (microfiche).
- Sybouts, Ward. "Instructor's Guide for Using Simulated Materials to Instruct School Administrators in the Area of Occupational Education." Nebraska University, Lincoln: Department of Educational Administration, 1967 (microfiche).
- Twelker, Paul A. "Simulation: What Is It? Why Is It?" Monmouth, Oregon: Teaching Research Division, Oregon State System of Higher Education, April 1968 (a).
- \_\_\_\_\_. "Simulation: An Overview." Monmouth, Oregon: Teaching Research Division, Oregon State System of Higher Education, July 1968 (b), (microfiche).
- \_\_\_\_\_. "Simulation: Status of the Field." Paper presented at the Conference of the Commission of Educational Media of the Association for Supervision and Curriculum Development, National Educational Association. Simulation: Simulation for Learning, Boston, Massachusetts, October 1968 (c), (microfiche).
- \_\_\_\_\_. "Designing Simulation Systems." Paper presented at the annual meeting of the American Educational Research Association, Los Angeles, California, February 1969 (a), (microfiche).
- \_\_\_\_\_, and others. "Instructional Simulation: A Research Development and Dissemination Activity. Final Report." Monmouth, Oregon: Teaching Research Division, Oregon State System of Higher Education, February 1969 (b), (microfiche).

\_\_\_\_\_. "A Basic Reference Shelf on Simulation and Gaming, A Series One Paper from ERIC at Stanford." California: ERIC Clearinghouse on Educational Media and Technology, Stanford University, June 1970 (a), (microfiche).

\_\_\_\_\_. "Development of Low Cost Instructional Simulation Materials for Teacher Education. Final Report." Monmouth, Oregon: Teaching Research Division, Oregon State System of Higher Education, July 1970 (b), (microfiche).

Warenhorst, Barbara. "Information Regarding the Use of the Life Career Game in the Palo Alto Unified School District Guidance Program." California: Palo Alto Unified School District, January 1971 (microfiche).

Weinberger, Morris J. "Methods of Using Simulated Materials in Teaching School Administration." Kansas: Wichita State University, 1965.

Wigderson, Harry I. "The Name of the Game--Simulation, Research Brief No. 4." Visalia, California: ADAPT, A PACE Supplementary Educational Center, June 1968 (microfiche).

### III. PERIODICALS

Archer, Fred C. "Simulated Experience: The New Element in Office Practice," Business Education World, October 1969, p. 9.

\_\_\_\_\_. "Get Started on Simulated Experience," Business Education World, November 1969, pp. 9, 19.

Barger, Virginia. "Office Simulation, An Effective Technique," The Balance Sheet, February 1970, pp. 259-261.

\_\_\_\_\_. "Simulation Provides Better Preparation for Office Employment," Business Education Forum, February 1970, pp. 14-15.

Blackstone, Bruce I. "The Office Worker and His Education," Journal of Business Education, October 1962, p. 27.

Boocock, Sarane and James S. Coleman. "Games with Simulated Environments in Learning," Social Education, Summer 1966, 215-36.

Briggs, G. E. and J. C. Naylor. "Team Versus Individual Training, Training Task Fidelity, and Task Organization Effects of Transfer Performance by Three-Man Team," Journal of Applied Psychology, XLIX, 1965, pp. 387-392.

- Burgess, Philip E., Lawrence E. Peterson, and Carl D. Frantz. "Organizing Simulated Environments," Social Education, February 1969, pp. 185-204.
- "Business Department Offers a Variety of Skills," The Frontiersman, Vol. 5 (Jackson High School, Portland, Oregon), 1971, p. 4.
- Cavuoti, Marilyn. "Beyond the Boundaries of the Blackboard," Business Education Forum, November 1970, pp. 42-43.
- Cherryholmes, Cleo H. "Some Current Research on Effectiveness of Educational Simulations: Implications for Alternative Strategies," American Behavioral Scientist, October 1966, pp. 4-6.
- Cohen, Bernard C. "Political Gaming in the Classroom," Journal of Politics, XXIV, 1962, pp. 364-381.
- Coleman, James S. "Learning Through Games," National Education Association Journal, LVI, January 1967, pp. 69-70.
- Cook, Fred S. and Frank W. Lanham. "The Simulated Office vs. Actual Experiences," Business Education World, October 1968, pp. 7-8.
- Crawford, Don L. and Vera G. Kinzey. "Preparing Office Clerical Workers through Teaching Based on Business Experience," Business Education Forum, XXI, February 1967, pp. 6-8.
- Crawford, Meredith P. "Dimension of Simulation," American Psychologist, XXI, 1966, pp. 788-795.
- Drenth, J. A. "Simulation = Stimulation; Realism = Relevance," The Balance Sheet, October 1966, pp. 61, 96.
- Edinger, Lois. "A Simulation Approach to Learning," Religious Education, LXIII, November 1968, pp. 473-78.
- Forte, John. "A Model Office on a Shoestring," The Balance Sheet, November 1969, pp. 115-117.
- Fruehling, Donald L. "The Clerical Curriculum of the Future," Business Education Forum, February 1971, pp. 21-22.
- Fuller, Marietta C. "Small Schools Can Initiate Vocational Business Education," The Journal of Business Education, December 1970, pp. 96-97.
- Fuller, Robert W. "Student Involvement Achieved through Creative Simulation," Business Education Forum, February 1970, pp. 18-20.



- Funk, Beverley, John McBeth, and Robert Poland. "Vocational Office Block Program," Journal of Business Education, March 1968, pp. 240-242.
- Funk, Beverley M. "A Blueprint for Successful Simulation," Business Education Forum, February 1970, pp. 21-28.
- \_\_\_\_\_. "Model Office Program," The Secretary, October 1969, pp. 32-33.
- Hanson, Garth A. "Let's Add the 'T' to Simulation," Journal of Business Education, March 1969, pp. 247-248.
- Hanson, Garth A., and E. Charles Parker. "Innovations in Business Education: MOE, Utah's Roving Laboratory," Business Teacher, September 1968, pp. 19-20.
- Hanson, Garth A., and Robert Stocker. "Mobile Simulation in Office Education," Business Education Forum, October 1968, pp. 17-18.
- Inbar, Michael. "The Differential Impact of a Game Simulating a Community Disaster," American Behavioral Scientist, 1966, 10(2), pp. 18-27.
- Jacobson, Arnold and Bruno Zachary. "Office Occupations Laboratory," The Balance Sheet, January 1969, pp. 209-10, 239.
- Jalowsky, Toby D. "The Model Office in an MDT Skill Center," Business Education Forum, October 1971, pp. 63-64.
- Jones, Adaline D. "The Enigmatic Intensive Office Laboratory," The Balance Sheet, April 1968, pp. 344-46, 384.
- Karsner, Jean C. "Successful Simulation Teaches Office Practice," Business Education Forum, April 1969, pp. 23-25.
- Kilchenstein, Dolores. "Simulation in Business and Office Education," Business Education Forum, February 1970, p. 7.
- Kirk, Beverly Clem. "Preparing Office Clerical Workers through Role Playing in the Secretarial Block Class," Business Education Forum, XXI, February 1967, p. 8.
- Krawitz, Myron. "A Model Office," Business Education World, September-October 1971, pp. 7-8.
- Long, Charles. "How Office Educators Meet the Challenge of Change," American Vocational Journal, November 1966, pp. 48-49.

- Mitchell, William. "Foundations of Office Education," American Vocational Journal, March 1968, pp. 28-30.
- Moskovis, Michael L. "Three Aspects of Office Practice: An Integrated Approach to Office Practice," Business Education World, March 1969, pp. 14-15.
- Pledger, Rosemary. "The Fringe Benefits of the Office Practice Laboratory," Business Education Forum, December 1968, pp. 19-21.
- Radding, Thelma R. "Preparing Office Clerical Workers through the Office Practice Laboratory," Business Education Forum, February 1967, pp. 14-15.
- Ringeisen, Carolyn. "A Model Office in the High School," Business Education Forum, October 1969, pp. 22-23.
- Sabin, William A. "Simulation in the Seventies: An Overview," Business Education World, September-October 1971, pp. 5-7.
- Shilt, Bernard A. "Office Education--A Partner in Vocational Education," American Vocational Journal, March 1965, pp. 21-22.
- Tate, Donald J. "Office Courses Aim at Salable Skills," Catholic School Journal, June 1966, pp. 49-51.
- Tener, Susan W. "Practice What you Preach," Journal of Business Education, March 1968, p. 262.
- Twelker, Paul A. "Classroom Simulation and Teacher Preparation," The School Review, LXXV, 1967, pp. 197-204.
- Wood, Jerry L., and Garth A. Hanson. "Office Practice--PPS," The Journal of Business Education, January 1969, pp. 151-52.
- Wynn, Richard. "Simulation: Terrible Reality in Preparation of School Administrators," Phi Delta Kappan, XLVI, 1964, pp. 170-173.

#### IV. BULLETINS, PROCEEDINGS, PAMPHLETS, AND MIMEOGRAPHED PAPERS

- "Course Guide in Business Education for High Schools." Thu Duc, Vietnam: Thu Duc Demonstration High School, 1968 (mimeographed).
- Cresto, Lorraine. "Block Clerical Secretarial Programs, A Community College Curriculum Guide." California: Shasta Community College, 1970.

"Illinois Curriculum Programs." Subject Field Series, Bulletin D-3. Springfield, Illinois: Office of the Superintendent of Public Instruction, 1963.

Immergart, G. "In-Basket Techniques in the Preparation of School Business Officials." Association of School Business Officials of the United States and Canada: Addresses and Proceedings, XLIX, 1963, pp. 426-432.

Plattner, J. W., and L. E. Herron. "Matrix: A Career Orientation Simulation." Simulation: Its Use in Employee Selection and Training. American Management Association Bulletin 20, 1962, pp. 6-21.

## APPENDIX A

Examples of literature and research containing lists of objectives:

Fred C. Archer, "The Status of Office Practice," The Office Practice Program in Business Education, The Eastern Business Teachers Association Yearbook, XLIII (Somerville, New Jersey: Somerset Press, 1969), pp. 3-13.

Doris A. Berry, "The Role of Office Practice Instruction in the Training for General Office Assignments," Doctoral Dissertation, Indiana University, 1963.

Course Guide in Business Education at High Schools. (Thu Duc: Thu Duc Demonstration High School, 1968), p. 21 (mimeographed).

Education for Business--Program Course and Courses of Study. State Department of Public Instruction (Raleigh: North Carolina Public Schools, 1963), p. 20.

Donald Fruehling, "The Clerical Curriculum of the Future," Business Education Forum (February 1971), pp. 21-22.

Handbook on Business Education (Portland, Oregon: Portland Public Schools, 1968), p. 92.

Illinois Curriculum Program. Subject Field Series, Bulletin D-3 (Springfield: Office of the Superintendent of Public Instruction, 1963), pp. 134-35.

John C. Roman, The Business Curriculum, Monograph 100 (Chicago: South-Western Publishing Company, 1960), p. 43.

Donald J. Tate, "Office Courses Aim at Salable Skills," Catholic School Journal (January 1966), pp. 49-51.

## APPENDIX B

Examples of teachers' designs and operations of their own office simulations are found in:

Virginia Barger, "Simulation Provides Better Preparation for Office Employment," Business Education Forum (February 1970), pp. 14-15.

John Forte, "A Model Office on a Shoestring," The Balance Sheet (November 1969), pp. 115-17.

Marietta C. Fuller, "Small Schools can Initiate Vocational Business Education," Journal of Business Education (December 1970), pp. 96-97.

Robert W. Fuller, "Student Involvement Achieved Through Creative Simulation," Business Education Forum (February 1970), pp. 18-20.

Beverly Funk, "Model Office Program," The Secretary (November 1969), pp. 32-33.

Arnold Jacobson and Bruno Zachary, "Office Occupation Laboratory," The Balance Sheet (January 1969), pp. 23-25.

Toby D. Jalowski, "The Model Office in an MDT Skill Center," Business Education Forum (October 1971), pp. 63-64.

Jean C. Karsner, "Successful Simulation Teaches Office Practice," Business Education Forum (April 1969), pp. 23-25.

Claire Lynch, "Ohio Program Brings the Office to the Student," Business Education Forum (February 1970), pp. 16-17.

APPENDIX C

Copy of letter from Miss Marguerite Appel, Coordinator of Overseas Projects, Ohio University Office of International Studies:

OHIO UNIVERSITY OFFICE OF INTERNATIONAL STUDIES  
ATHENS, OHIO 45701  
International Academic Services  
Burson House, 56 E. Union St.  
614-594-5821

March 8, 1972

Luu Thi Minh Chau

Dear Chau:

I've read your opinionnaire with a good deal of interest - I didn't answer the first part because I'm not in a teaching situation and I couldn't recall enrollment figures.

You may be disappointed in the returns because I don't believe that office practice has been phased into the curriculum of any of the pilot schools.

Miss Kim Hong is probably the only person teaching office practice; some of her students who have had the first course may be able to give an opinion.

I received a letter from Dr. Inman. Your papers have arrived and our office will assist.

Good luck!

Sincerely,

/s/ Marguerite Appel

Marguerite Appel  
Coordinator of Overseas Projects

MA:jm

Enclosure: Opinionnaire

- - COPY - -