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DEVELOPMENT OF A PROJECT MANAGEMENT
SYSTEM MODEL FOR EDUCATIONAL
PROJECT MANAGERS

by

Robert P. Hamet

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment
of the
Degree of Doctor of Education

Western Michigan University
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April 1974

DEVELOPMENT OF A PROJECT MANAGEMENT
SYSTEM MODEL FOR EDUCATIONAL
PROJECT MANAGERS

Robert P. Hamet, Ed.D.

Western Michigan University, 1974

The focus of this dissertation is on the development of a project management system model. A project is defined as an endeavor organized and implemented by people to meet an expressed need, idea, or problem and is usually operated for a limited duration. Project management is a process of management concerned with initiating, maintaining, and evaluating a project.

A monograph is developed to present a project management system model for project managers in education. The premise behind the model is that effective people plus effective programs and organization equal effective results. In all projects there is the necessity to set goals, develop programs to achieve the goals, and provide avenues of growth and development for people as they execute the programs to meet the goals.

The monograph provides a step-by-step procedure for a project manager in initiating and operating an educational project. The development of the model emphasizes that management systems have a common basis in terms of the managerial skills, leadership skills, and management practices needed by a manager. The

dissertation is not a treatise on management. The focus of the dissertation is on educational project management with particular emphasis on the skills needed by a project manager.

There are five chapters in the dissertation. Chapter I provides the rationale for the dissertation and the references to related literature. Chapter II describes the procedures used to create the model. Chapter III presents an assessment of field data gathered to assist in development of model content. Chapter IV presents the project management system model. Chapter V is a summary.

ACKNOWLEDGEMENTS

To my inspirations in life, my wife Carol and children Amy and Molly, I am forever indebted for their patience, understanding, and help.

I also owe a great deal to my committee members for their critical yet positive advice and counsel: Dr. Harold Boles, Dr. Gordon Johnson, and Dr. Ted Ploughman. Also, a special thank you to my adviser, Dr. Ted Ploughman, who gave much of himself in assisting me.

To Henry Dahl of The Upjohn Company, I feel a deep appreciation for access to written information he developed for use in training managers for The Upjohn Company.

Also, I appreciate and thank the project managers who responded to the questionnaire and Michigan State Department of Education staff who were interviewed. I owe a special thank you for the specific assistance of Judy Battenschlag and Bob Rochow, project managers in Pontiac, and to Dave Randall, project manager in Constantine, for their excellent advice and help.

And, thanks be to God that I'm finished!

Robert Hamet

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CHAPTER I

PROBLEM STATEMENT AND REVIEW OF LITERATURE

Introduction

There is substantial evidence that a leader or manager is a primary component of an effective organization (Lippitt & Sea-shore, 1961; Argyris & Harrison, 1962; Halpin, 1966; Granger, 1971; Cribbin, 1972). There seems to be general agreement that organizational and individual personality variables interact affecting the achievement of organizational goals. As a result, the astute leader or manager is concerned with developing and implementing organizational goals while concurrently maximizing worker satisfaction, personal growth, or self-actualization (Trusty, 1971). The desired outcome of effective leadership is a measure of productivity, efficiency, and worker growth and satisfaction. Argyris and Harrison (1962) state:

Administrative competence is related to the organization's abilities to achieve its objectives, maintain itself internally, and adapt to its external environment (p. 15).

Moreover, historically there has been a substantial amount

of work by many writers and researchers on organizations and on how to satisfy individual motives in an organization (Drucker, 1954, 1969; Maslow, 1954; Herzberg, Mausner & Snyderman, 1959; Likert, 1961; Lawrence & Seiler, 1965; Morphet, Johns & Reller, 1967; Hattery, 1968; Humble, 1970; Marrow, 1972). It seems apparent, according to Bennis (1969), that,

Effective leadership depends primarily on mediating between the individual and the organization in such a way that both can obtain maximum satisfaction (p. 66).

However, Barrett (1970) states:

While the problems of integrating individual goals with organizational objectives have been frequently discussed, there are very few empirical studies which deal directly with this issue (p. 2).

Concurrently, through the years, much writing and research have been done on how a leader or manager can be effective. The theories alluded to in the literature have evolved according to Campbell, Corbally and Ramseyer (1966) as follows: "job analysis, 1910-1930; human relations, 1930-1950; and behavioral science, 1950 to the present (p. 75)." Much of the literature in the past has focused on leadership traits and styles (Stogdill, 1948; Schmidt, 1961; Bennis, 1969; Reddin, 1970; Trusty, 1971). However, the weaknesses of the trait approach are that there is no agreement on the best traits that fit all situations (Reddin, 1970). Trusty (1971) states:

To date relatively little work has been devoted to the problem of defining the conditions under which different leadership styles are effective (p. 148).

Also, Fiedler (1967) states, " . . . we know next to nothing about the factors that make the leader effective or ineffective (p. 3)."

According to Bennis (1969), "Since 1950 a number of authors have attempted to reconcile and integrate classical and modern organizational theory (p. 69)." The authors he refers to include: Philip Selznick, Mason Haire, William F. Whyte, Rensis Likert, Herbert Shepard, Alvin W. Gouldner, Herbert A. Simon, and Abraham Zaleznik.

Moreover, according to Trusty (1971),

Theories of organizational leadership are alike in asserting that both organizational and personality variables are important. However, most of them fail to define specifically the set of organizational and personality variables they deal with and so are unable to describe fully the way in which such variables interact in determining organizational productivity and worker satisfaction (pp. 149-150).

Recently, the literature and research in the field of leadership and management have focused on leadership effectiveness as determined by situational factors (Fiedler, 1967; Bennis, 1969; Reddin, 1970; Trusty, 1971). The notion is that leadership behavior should be determined and subsequent effectiveness affected by situational task requirements and employee behavior.

With the foregoing information in mind, it is the intent of

this study to list and describe effective and efficient organizational and individual variables in terms of a project management system model.

Problem Statement

The focus of this dissertation is on the skills a project manager needs to effectively plan, organize, implement, and control the people and programs of his project. Attention is also given to the components of a model project management system. In essence, this study has been developed into a practical project management system model that can be used as a guide by project managers.

The writer's intention was to identify and describe project manager skills and project management system components. Accordingly, the skills and system components identified and described include a mixture of management tasks, behavior, styles, and procedures. In a sense, the approach taken by the writer was eclectic in that many management theories and practices are imbedded in the system developed.

Objectives

The specific objectives of this dissertation are:

1. To list and describe project management components

that result in project management effectiveness;

2. To list and describe the skills needed by a project manager to be effective; and

3. To translate the project management components and skills needed by a project manager into a project management system model.

Rationale and Related Literature

For this study, project management effectiveness is defined as the quality and quantity of responses needed by the project manager and his staff to meet the project goals. The notion is that the project manager and his staff need a number of responses that can be implemented well. According to Carkhuff (1971), "effectiveness is a function of the number and level of responses which an individual has (p. 146)." Carkhuff (1971) further states:

Effectiveness, then, is a function of the individual's (or group of individuals') ability to attain goals in any particular or general area. This ability to attain goals, in turn, is defined by the quantity and quality of the responses which an individual has in each and all spheres of functioning (p. 146).

The effective manager is perceptive of the personality and need dispositions of his staff and also sets up necessary roles and expectations for performance. To be effective, the manager must be knowledgeable about planning methods, leadership styles, and

this study to list and describe effective and efficient organizational and individual variables in terms of a project management system model.

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The effective manager is perceptive of the personality and need dispositions of his staff and also sets up necessary roles and expectations for performance. To be effective, the manager must be knowledgeable about planning methods, leadership styles, and

management practices. Also, the manager must be particularly skillful in the area of interpersonal skills.

The literature and research in leadership and management are extensive. However, much of the literature and research lacks specificity in assisting leaders or managers to translate a series of facts and concepts into meaningful principles, skills, and practices.

The overall frame of reference for the model was based, to a great extent, on the writings of Carkhuff (1969, 1971, 1972). Further, the scope of the model covered the relationships of individuals involved in a project and how they can and should function within it. According to Carkhuff (1971):

The most important single variable in the effectiveness of a program, then, is the level of functioning of its implementors. While the system of a program has its own distinctive contributions to make, the success of the program stands or fails primarily on the effectiveness of the individuals who are conducting it. As we have already seen, the helper functioning at high levels serves as both model and agent for the helpee: helpees functioning at low levels move in the direction of their high-level helpers over the course of the helping process (p. 132).

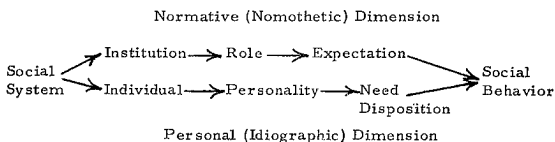
Additionally, five models were reviewed as representative of the literature and research: Contingency Model (Fiedler, 1967); Social System Model (Getzels & Guba, 1957); The Managerial Grid (Blake & Mouton, 1964); 3-D Theory (Reddin, 1970); and Kepner-Tregoe Model (Kepner & Tregoe, 1965). Also, management by

objectives was investigated (Drucker, 1954; Hughes, 1965; Odiorne, 1969; Humble, 1970; Reddin, 1970; Ross, 1971; Morris, 1972).

The Contingency Model of leadership effectiveness has as its underlying hypothesis the effectiveness of a group depends upon the interaction between the leader's style of relating to his group members and the degree to which the situation provides the leader with the opportunity to exert influence. Hence, the degree of favorableness of the group situation for the leader should dictate the leadership style used by a leader. Fiedler (1967) states:

Task-oriented leaders perform best in situations which are highly favorable for them or in those which are relatively unfavorable. Considerate, relationship-oriented leaders tend to perform best in situations in which they have only moderate influence, either because they are not too well accepted although their position power is high and the task is structured (p. 147).

Getzels and Guba's Social System Model specifies that social behavior is manifested in a social system setting. The behavior is a result of an individual's attempts to cope with an environment composed of patterns of expectations for his behavior in ways consistent with his own pattern of needs and dispositions (Getzels & Guba, 1957). The model follows:



The Kepner-Tregoe Model is a systematic method and action sequence for problem analysis and decision making (Kepner & Tregoe, 1965). The model is a step-by-step approach that can be implemented by any manager. Essentially, problem analysis involves observation, analysis, and comparisons aimed at finding cause, whereas decision making involves stating clear objectives and carefully evaluating alternatives which lead to action.

The Managerial Grid identifies manager styles based on the components of concerns for people and concerns for production (Blake & Mouton, 1964). The levels of concern are numbered from one to nine on the horizontal axis, concern for production, and from one to nine on the vertical axis, concern for people. Manager style can be described based on the manager's attitudes and behavior patterns for being production or task-oriented as opposed to person-oriented. According to Blake and Mouton (1964),

What is significant is how a supervisor is concerned about production and how he concerns himself about people, and how these concerns intertwine (p. 81).

They further theorize the most effective level is the one that has the highest degree of concern for production and concern for people. Said another way, the most effective level includes work accomplishment from committed people acting interdependently through a common purpose leading to relationships of trust and respect.

The 3-D Theory of Reddin (1970) is a model based on task orientation and relationship orientation. The theory is based on Theory Z, the rational situationist view of man, pioneered by many people, including: Urwick, 1944; Sullivan, 1953; Drucker, 1954. Reddin describes Theory Z in the following manner:

Man has a will.
 He is open to good and evil.
 Situation drives man.
 Reason motivates him.
 Interdependence is man's basic mode of interaction.
 Interaction is man's social unit of importance.
 Objective best describes man's view of man (p. 190).

Reddin (1970) identifies eight leadership styles in terms of style flex which is the term used to describe the ability to vary one's own basic style of behavior. Managers who use a variety of basic styles regularly have high flex while those managers who use one basic style consistently have low flex. The result is that managers with high flex are more effective provided the style in a given situation is appropriate.

Further, according to Reddin (1970), there are eight different types of manager or executive styles that can be defined on the basis of three different characteristics:

1. Task orientation--a quality of wanting to get a job done.
2. Relationships orientation--the quality of being interested primarily in people.
3. Effectiveness--the ability to obtain high productivity.

He continues by saying, based on how much of each characteristic an executive possesses, eight managerial types have been defined.

1. The deserter, who has none, or only a minimum of the three characteristics.
2. The bureaucrat, who has effectiveness only.
3. The missionary, who only has relationships orientation.
4. The developer, who has both effectiveness and relationships orientation.
5. The autocrat, who has task orientation only.
6. The benevolent autocrat, who has both effectiveness and task orientation.
7. The compromiser, with both task orientation and relationships orientation.
8. The manager, who has all three characteristics.

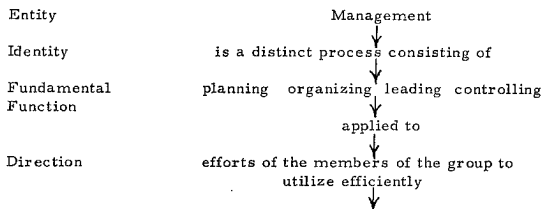
Of primary reference in this study is the work of four of the originators of management-by-objectives systems: Drucker, 1954; McGregor, 1960; Odiorne, 1969; Humble, 1970. The notion that an organization should be managed by goals or objectives has been a widely practiced and accepted procedure of management. According to Reddin (1970), however, many management-by-objectives systems in business have failed because of improper implementation. Therefore, the desired results could not be obtained. However, the literature seems to affirm that a well organized and implemented system of management by objectives

is the most sound basis of managing an organization (Drucker, 1954; Hughes, 1965; Odiorne, 1969; Humble, 1970; Reddin, 1970; Alioto, 1971; Ross, 1971).

Odiorne (1969) states:

Management by objectives . . . presumes that management of our affairs on a continuing basis requires that we define objectives before we release energy or resources to achieve them. If you aren't clear where you are going then the road too must be unclear, if you aim for nothing, that is what you will achieve. Management by objectives requires a commitment. If you are committed to an objective, to somebody else whose opinion is important to you, you are practically obliged to do something about it . . . there is an ascending hierarchy of objectives: (1) regular or routine--measured by exceptions from standard objectives; (2) problem solving--measured by solutions and time established as objectives; (3) innovative goals--measured by productive changes sought and achieved in time (p. 8).

A further primary reference for this study was the work of Terry (1960) in defining management. The following graphic definition of management was used by Terry as a basis for defining project management.



Available Resources	the group's materials, machines, methods, money, and human efforts
Purpose	in order to achieve the predetermined objectives.

Also of importance was the work of Cook in terms of defining a project management system. According to Cook (1971):

A project management system should develop an initial plan for a project which includes time, cost, and performance specifications. It should also provide a vehicle for monitoring and controlling the operation once the project is initiated (p. 186).

Also, in addition to Cook, other resources on project management were reviewed (Martino, 1968; McGrath, 1972; Immegart & Pilecki, 1973).

Other areas of investigation included human relations and communication, and problem solving and decision making. A number of references were used in the area of human relations and communication: Maslow, 1954; Gordon, 1955; Cartwright & Zander, 1960; Rogers, 1961; Carkhuff, 1969, 1971, 1972. In terms of problem solving and decision making, the primary references used were the works of the following people: Griffiths, 1959; Brown, 1961; Kepner & Tregoe, 1965; Van Dusseldorp, Richardson & Foley, 1971; Carkhuff, 1973.

In conclusion, the emphasis of the review of literature included the following: project management, management systems,

human relations and communication, problem solving and decision making, management types and skills, and management by objectives. Chapter II presents the procedures followed in developing the model, and Chapter III is an analysis of the data gathered. Subsequently, in Chapter IV, all pertinent information gathered has been translated into a practical project management system model. Chapter V is a summary.

CHAPTER II

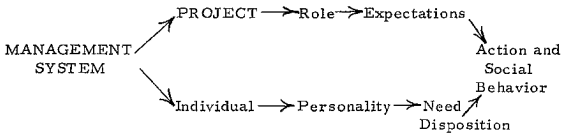
PROCEDURES

It was readily apparent to the writer from an early review of literature that management and leadership have had extensive coverage. On the other hand, the subject of project management, particularly as it relates to education, has had less extensive coverage. Accordingly, in considering the procedures to follow, the writer decided to use four primary references of information for this work: (1) a review of literature on management, project management, leadership, decision making, human relations, and communication; (2) a list and description of the specific skills a project manager needs to be effective; (3) a list and description of components of an effective delivery system; and (4) three field assessments of the model by a large district, over 15,000 students, and a small school district, under 3,500 students.

The specific procedures for this study related to the four primary references of information are contained in Exhibit A, Appendix A.

General Model Design

An adaptation of the Social System Model by Getzels and Guba (Getzels & Guba, 1957) was utilized as an overall guide. Their model is illustrated in Chapter I. The adaptation made is illustrated as follows:



An attempt was made to identify the project and individual variables in a project management system that lead to effective functioning of individuals and the attainment of project goals. Subsequently, the project and individual variables were identified and developed into a project management system model. Additionally, the focus of the model was on the interface between the project manager and his staff.

Particular attention was given to a thorough review of management system models. Further, the essential common themes or variables from each model which were appropriate were incorporated as a part of the project management system model. However, care was exercised in developing the model into a

practical and useable tool that may have general application to any project.

As stated earlier, information from an empirical investigation of written research and literature in many areas was used. The primary criteria used to determine the information included in the model were whether the components had clarity of purpose and operational utility. Also contained were findings based on the following: (1) opinions on delivery systems by personnel working in the Michigan State Department of Education, and (2) answers to a questionnaire regarding "skills needed to be effective" sent to a sample of project managers in Michigan. Also, three field assessments of the project management system model and the opinions, judgments, and values of the writer were used as primary references.

Chapter IV consists of a monograph which defines and describes the project management system model. The project management system components contained in the monograph provide direction for a project manager and his staff. Also contained is a listing of specific skills needed by a project manager. Further emphasis in the monograph was placed on leadership styles and behavior as described in different situations. Said another way, situational factors may determine the overt application of different leadership skills or styles to maximize project leadership effectiveness.

Information Collection

Three techniques were used to gather information. The techniques are explained in the following part of Chapter II.

Questionnaire

The Michigan State Department of Education was approached to secure the names and addresses for a sample of project managers. The primary sources were the Elementary and Secondary Education Act (ESEA) Title III Office and the Division of Vocational Education and Career Development Services (VECDS). Every project from ESEA Title III and every project from VECDS that is funded under "Exemplary Funds" were selected. As a result, a group of seventy-four project managers were selected as representative of projects in Michigan. Despite the fact that not all projects in Michigan had the same chance of being selected in the sample of seventy-four, it is believed the projects selected did represent an appropriate cross-section. Therefore, it is assumed by the writer that sufficient representation of projects in Michigan was obtained so that generalizations to other projects are justified. The analysis and results of the questionnaires are contained in Chapter III. Also, a copy of the questionnaire is contained in Exhibit B, Appendix A.

In developing the questionnaire, care was taken to list

clear and succinct instructions. The writer was guided by his committee who reviewed the questionnaire and provided helpful suggestions and recommendations. The body of the questionnaire was devised so that respondents had a list of forty-four skills in four skill areas from which to make selections.

Interviews

Fourteen staff members of the Michigan State Department of Education were selected to be interviewed on the subject of delivery systems. The members were selected on the basis of their knowledge and experience in developing and implementing delivery systems in Michigan. There is limited information in the literature about delivery systems. In fact, it is apparent that the Michigan State Department of Education is helping to establish the concept. It became apparent to the writer that the concept must be defined and described since managers of projects throughout Michigan are being requested to develop and implement effective delivery systems.

The fourteen people selected were from the following Michigan State Department of Education offices: nine from the Division of Vocational Education and Career Development Services, three from Elementary and Secondary Education Act Title III, and two from the Research and Development Division.

A preliminary letter was mailed to each of the respondents prior to an interview. The letter explained the purpose of the interview and confirmed the time, day, and place for the interview. Also accompanying the letter was a list of the seven questions to be asked, along with definitions of the four terms that were primary in the interview questionnaire. Copies of the letter, interview questionnaire, and definitions are contained in Exhibits C, D, and E in Appendix A.

After a brief introduction in which the nature of the project was explained to the interviewees, the interviewer informed the interviewees that he was primarily interested in reactions to the questions based on the interviewee's frame of reference. Each interviewee was told that he could respond at his own rate to each question. Also, each interviewee was told that the interviewer at times might respond to the interviewee's answer and ask other questions depending on how the interview was proceeding. Generally, however, each interviewee reacted to the seven questions in sequence, with the interviewer responding to obtain clarification of answers or to respond to questions. The interviews generally averaged about forty-five minutes, with the range being from about thirty minutes to two and one-half hours.

Field Assessments

Field assessments were utilized as an external validation of the model being developed. The assessments were conducted with project managers from three projects:

1. Constantine Public Schools, "Experimental Rural Schools Project."
2. Pontiac Public Schools, "Pontiac Vocational Career Development Program," project.
3. Pontiac Public Schools, "Comprehensive Career Education Model," project.

The project managers for the three projects were involved in reviewing the preliminary draft and greatly assisted in providing suggestions and recommendations. Specific details of the interaction of the three project managers is not discussed in this document. The responses were used in finalizing the monograph.

Summary

In summary, four stages of model development were used in the study: (1) review of literature, (2) listing and description of project manager skills, (3) listing and description of components of an effective delivery system, and (4) three field assessments.

The project and individual variables in a project management system that lead to effective functioning of individuals and the attainment of project goals were identified. Subsequently, the

project and individual variables were identified and developed into the project management system model.

CHAPTER III

DATA ASSESSMENT

As described in Chapter II, the instruments used in this study were a questionnaire on project manager skills completed by selected project managers and an interview on delivery systems with staff members from the Michigan State Department of Education. The data obtained through use of the instruments are described and analyzed in this chapter.

Interviews

Fourteen Michigan State Department of Education staff members' interviews were tape recorded. The responses to each of the questions are paraphrased and listed in Exhibit F, Appendix B. Each question asked in the interview, along with an assigned respondent number and response, are provided in Exhibit F.

The purpose of interviewing the Michigan State Department of Education personnel was to ascertain their opinions in regard to defining and describing the concept of a delivery system. A secondary purpose was to determine the role of a project manager

in planning, programming, implementing, and controlling an effective delivery system. The reader is referred to Exhibits C, D, and E in Appendix A for copies of the interview confirmation letter, interview questionnaire, and definitions of planning, programming, implementing, and controlling.

Some questions did not have responses listed from each respondent. Some respondents either skipped the questions or answered generally. Only the pertinent and directly related question responses are recorded in Exhibit F.

Most of the respondents referred to the Michigan State Department of Education Accountability Model during the course of their interview. The Accountability Model consists of six elements and is described as follows by the Michigan State Department of Education (1972):

1. Identification, discussion, and dissemination of common goals for Michigan education.
2. Approaches to educational challenges based on performance objectives consistent with the goals.
3. Assessment of educational needs not being met, and which must be met to achieve performance objectives and goals.
4. Analysis of the existing (or planned) educational delivery systems in light of what assessment tells us.
5. Evaluation and testing within the new or existing delivery system to make sure it serves the assessed needs.

6. Recommendations for improvement based upon the above (p. 2).

As one reads the responses to the questions, there seems to be commonality in terms of the definitions and components of a delivery system. Also, there seems to be commonality in regard to the role of a project manager. Most respondents stated the role of a project manager varies based on the size or scope of a project.

The respondents believed a delivery system could be described as the use of necessary human and non-human resources to achieve project goals and objectives. An effective delivery system would directly lead to achievement of the goals and objectives. Their perceptions were that a delivery system is the avenue to accomplish the project goals.

In terms of the components of an effective delivery system, respondent number one (Exhibit F, Appendix B) gave the most complete answer. All respondents believed that basic components of a delivery system partition into human and non-human resources. The respondents noted that people who can assist in accomplishing the project goals and objectives are the most essential component.

In reference to questions two through six, the respondents believed the role of a project manager varies depending upon the size or scope of a project. It was believed by the respondents that a project manager must play whatever role is necessary to plan, program, implement, and control project activities to meet the

goals. Respondent number eleven (Exhibit F) provided good answers to questions three, four, and six. Most of the other respondents' comments agreed in part to respondent eleven's comments. In terms of question five, the roles for project managers included: advisor, monitor, facilitator, implementor, and problem solver.

Further analysis of the responses to the questions is provided in Section Three of Chapter IV. Also, the responses were used as a frame of reference for other sections in Chapter IV.

Questionnaire

Seventy-four project managers chosen from ESEA Title III and Vocational Education and Career Development Service projects were asked to identify necessary project manager skills. A questionnaire was distributed. Thirty-six (48.6%) of the questionnaires returned were useable. Twenty-eight of the questionnaires were completed, and eight were partially completed.

The project managers were asked to specify three choices pertaining to skills outlined under each of four areas: physical skills, intellectual skills, intrapersonal skills, and interpersonal skills. Three choices were specified by project managers in each of the following categories: non-effective project managers, effective project managers, and the most important skills. Also,

each project manager was asked to rate himself on each skill using a scale of one to five. Five represented the highest rating and one the lowest. Specific instructions and a copy of the questionnaire are provided in Exhibit B, Appendix A.

The analysis of the returned questionnaires identifies those skills checked most frequently by the project managers. The analysis includes each of the skill areas (i.e., intellectual, interpersonal, etc.) and skill categories (i.e., non-effective, effective, etc.). The objectives for identifying the most frequently checked skills were:

1. To rank the skills identified from most to least important.
2. To identify the three skills in each skill area checked most frequently in the three categories of non-effective project managers, effective project managers, and most important skills.
3. To list and analyze the self-profile scores.
4. To use the results as a guideline in writing Section Six of Chapter IV.

Analysis of questionnaire responses

Table 3.1 and Table 3.2 present questionnaire response data. Table 3.1 lists the number of times each skill was checked, and Table 3.2 lists the rank order of the skills based on the frequency with which each skill was checked.

TABLE 3.1. --Distribution of project manager responses to skill area items for non-effective and effective managers, and most important items

Skills	Frequency of Responses		
	Non-Effective Managers	Effective Managers	Important Skills
<u>Physical Skills</u>			
Possesses high energy level	21	29	33
Maintains good health	9	14	13
Maintains body weight and type to height	11	6	4
Maintains a good posture	6	8	3
Speaks fluently and clearly	24	33	33
Writes legibly	11	9	13
Maintains good muscle tone	4	1	0
Total Number Responding	29	33	33
<u>Intellectual Skills</u>			
Makes needed decisions	12	19	25
Motivates staff to accomplish project goals	11	18	16
Defines and describes project goals	14	8	9
Communicates well in writing	4	7	1
Delegates to others tasks to be accomplished	5	6	5

TABLE 3.1 (Continued)

Skills	Frequency of Responses		
	Non-Effective Managers	Effective Managers	Most Important Skills
Organizes staff, money, and other resources to accomplish project goals	9	19	14
Analyzes behavior or personality characteristics of different individuals	5	3	3
Directs and evaluates staff and the implementation procedures to accomplish goals	9	5	10
Analyzes problems and establishes alternatives to solve the problems	14	16	16
Organizes thoughts	5	1	2
Demonstrates creativity	3	3	0
Develops a positive staff morale	11	4	4
Total Number Responding	34	36	35
<u>Intrapersonal Skills</u>			
Is self-revealing	4	1	1
Tolerates ambiguity	7	0	1
Relieves tension by relaxing	4	3	3
Feels optimistic and hopeful	5	8	6
Feels self-confidence in self	17	23	23

TABLE 3.1 (Continued)

Skills	Frequency of Responses		
	Non-Effective Managers	Effective Managers	Most Important Skills
Feels enthusiastic toward job	17	22	21
Has a secure feeling toward self	11	6	3
Possesses the "will to win" (drive)	11	18	20
Has faith in staff	10	6	3
Possesses loyalty to project and overall organization or agency	8	12	11
Possesses courage	8	6	8
Total Number Responding	33	33	33

Interpersonal Skills

Demonstrates flexibility and accepts change	10	16	16
Demonstrates tact in dealing with others	15	14	11
Is a good listener	11	8	7
Deals with "tense" situation calmly	5	4	4
Communicates well verbally when presenting information to a group	10	11	10
Communicates well in a group as a group participant	5	6	3

TABLE 3.1 (Continued)

Skills	Frequency of Responses		
	Non-Effective Managers	Effective Managers	Most Important Skills
Expresses empathy (shows understanding)	7	5	5
Expresses respect (displays a caring attitude)	5	2	5
Expresses concreteness (being specific when communicating)	9	5	7
Expresses genuineness (being "real" as opposed to "phoney")	8	7	7
Demonstrates confronting skills (telling it "like it is")	6	8	4
Expresses immediacy (saying on the spot what is going on between you and another person, or what is going on in a group in which you are participating)	1	1	2
Positively reinforces appropriate staff behavior and ignores or negatively reinforces inappropriate staff behavior	4	5	7
Demonstrates pride in staff accomplishments	2	3	3
Total Number Responding	33	32	30

TABLE 3.2.--Percentage and rank for project manager responses to skill area items for non-effective and effective managers, and most important skills

Skills	Responses					
	Most Important Skills		Effective Managers		Non-Effective Managers	
	Rank	%	Rank	%	Rank	%
<u>Physical Skills</u>						
Speaks fluently and clearly	1.5	100	1	100	1	83
Possesses high energy level	1.5	100	2	88	2	72
Maintains good health	3.5	39	3	42	5	31
Writes legibly	3.5	39	4	27	3.5	38
Maintains body weight and type to height	5	13	6	18	3.5	38
Maintains a good posture	6	9	5	24	6	21
Maintains good muscle tone	7	0	7	3	7	14
<u>Intellectual Skills</u>						
Makes needed decisions	1	71	1.5	53	3	35
Motivates staff to accomplish project goals	2.5	46	3	50	4.5	32
Analyzes problems and establishes alternatives to solve the problems	2.5	46	4	44	1.5	41
Organizes staff, money, and other resources to accomplish project goals	4	40	1.5	53	6.5	26

TABLE 3.2 (Continued)

	Responses					
	Most Important Skills		Effective Managers		Non-Effective Managers	
	Rank	%	Rank	%	Rank	%
Directs and evaluates staff and the implementation procedures to accomplish goals	5	29	8	14	6.5	26
Defines and describes project goals	6	26	5	22	1.5	41
Delegates to other tasks to be accomplished	7	14	7	17	9	15
Develops a positive staff morale	8	11	9	11	4.5	32
Analyzes behavior or personality characteristics of different individuals	9	9	10.5	8	9	15
Organizes thoughts	10	6	12	3	9	15
Communicates well in writing	11	3	6	19	11	12
Demonstrates creativity	12	3	10.5	8	12	9
<u>Intrapersonal Skills</u>						
Feels self-confidence in self	1	70	1	66	1	52
Feels enthusiastic toward job	2	64	2	63	2	45
Possesses the "will to win" (drive)	3	61	3	51	3.5	33

TABLE 3.2 (Continued)

Skills	Responses					
	Most Important		Effective		Non-Effective	
	Rank	%	Rank	%	Rank	%
Possesses courage	5	24	7	17	6.5	24
Feels optimistic and hopeful	6	18	5	23	9	15
Relieves tension by relaxing	7	9	9	9	10.5	12
Is self-revealing	9.5	3	10	3	10.5	12
Tolerates ambiguity	9.5	3	11	0	8	21
Has a secure feeling toward self	9.5	3	7	17	3.5	33
Has faith in staff	9.5	3	7	17	5	30
<u>Interpersonal Skills</u>						
Demonstrates flexibility and accepts change	1	53	1	50	3.5	30
Demonstrates tact in dealing with others	2	37	2	44	1	45
Communicates well verbally when presenting information to a group	3	33	3	34	3.5	30
Is a good listener	5.5	23	4.5	25	2	33
Expresses genuineness (being "real" as opposed to "phony")	5.5	23	6	22	5	24

TABLE 3.2 (Continued)

Skills	Responses					
	Most Important		Effective		Non-Effective	
	Rank	%	Rank	%	Rank	%
Expresses concreteness (being specific when communicating)	5.5	23	9	16	5	27
Positively reinforces appropriate staff behavior and ignores or negatively reinforces inappropriate staff behavior)	5.5	23	9	16	12	12
Expresses empathy (shows understanding)	8.5	17	9	16	7	21
Expresses respect (displays a caring attitude)	8.5	17	13	6	10	15
Deals with "tense" situation calmly	10.5	13	11	13	10	15
Demonstrates confronting skills (telling it "like it is")	10.5	13	4.5	25	8	18
Communicates well in a group as a group participant	12.5	10	7	19	10	15
Demonstrates pride in staff accomplishments	12.5	10	12	9	13	6
Expresses immediacy (saying on the spot what is going on between you and another person, or what is going on in a group in which you are participating)	14	7	14	3	14	3

Physical skills. --The project managers checked the physical skills "speaks fluently and clearly" and "possesses high energy level" most frequently in each of the three categories. The implication from the physical area response distributions is that these two skills far exceeded the other skills in terms of importance.

Intellectual area. --In the intellectual area, four skills were checked frequently enough to warrant comment. The skills were: makes needed decisions; analyzes problems and establishes alternatives to solve the problems; motivates staff to accomplish project goals; and organizes staff, money, and other resources to accomplish project goals.

In the non-effective category, the skills "defines and describes project goals" and "analyzes problems and establishes alternatives to solve the problems" were checked most frequently.

The implications from the intellectual skill area data are that the most successful project managers will: make needed decisions, analyze problems and establish problem-solving alternatives, motivate staff, and organize resources. It is further inferred that effective project managers must also be able to "define and describe project goals."

Intrapersonal skills. --In the intrapersonal area, three skills were checked frequently for each of the three categories. The skills were: feels self-confidence in self, feels enthusiastic

toward job, and possesses the "will to win" (drive).

Interpersonal area. --In the interpersonal area, three skills were identically ranked in the effective and most important skills categories. The skills were: demonstrates flexibility and accepts change, demonstrates tact in dealing with others, and communicates well verbally when presenting information to a group. There was a difference in the skills identified in the non-effective category compared to the other two categories. The skills listed frequently for the non-effective category were: demonstrates tact in dealing with others, is a good listener, demonstrates flexibility and accepts change, and communicates well verbally when presenting information to a group.

The implications in the interpersonal area are that three skills were checked slightly more frequently in each category than any other skills and, as a result, can be deemed more important. However, the skill, "is a good listener," was ranked second in the non-effective category and deserves recognition.

In conclusion, eight skills were checked in one or more of the three categories by over fifty percent of the project managers. The skills and percentages by category are:

1. "Possesses high energy": most important skills category (100%), effective category (88%), and non-effective category (72%).
2. "Speaks fluently and clearly": most important skills

category (100%), effective category (100%), and non-effective category (83%).

3. "Makes needed decisions": most important skills category (71%), effective category (53%), and non-effective category (35%).
4. "Feels self-confidence in self": most important skills category (70%), effective category (66%), and non-effective category (52%).
5. "Feels enthusiastic toward job": most important skills category (64%), effective category (63%), and non-effective category (45%).
6. "Possesses the 'will to win' (drive)": most important skills category (61%), effective category (51%), and non-effective category (33%).
7. "Demonstrates flexibility and accepts change": most important skills category (53%), effective category (50%), and non-effective category (30%).
8. "Organizes staff, money, and other resources to accomplish project goals": effective category (53%), most important skills category (40%), and non-effective category (26%).

Analysis of self-profile ratings

Tables 3.3 and 3.4 and the Self-Profile Graphs 1 through 5 provide summary data from the questionnaires of the project managers' self ratings. The graphs provide the average ratings in each skill area and average ratings across all skill areas. Table 3.3 provides the frequency of responses for each skill and average skill ratings. Table 3.4 provides a listing of skills within each of the four skill areas receiving a rating above the

TABLE 3.3.--Self ratings by project managers for physical, intellectual, intrapersonal, and interpersonal skills

Skills	Frequency of Responses					Total Re- sponses	Aver- age Rating
	Rating		Scale*				
	1	2	3	4	5		
<u>Physical Skills</u>							
Possesses high energy level				16	19	35	4.54
Maintains good health			3	15	17	35	4.40
Maintains body weight and type to height		2	11	13	9	35	3.83
Maintains a good posture		1	7	21	5	34	3.88
Speaks fluently and clearly		1	6	17	11	35	4.09
Writes legibly	3	2	12	10	7	34	3.53
Maintains good muscle tone		1	10	18	1	30	3.63
Totals	3	7	49	110	69	238	3.99
<u>Intellectual Skills</u>							
Makes needed decisions		1	1	23	10	35	4.20
Motivates staff to accomplish project goals			3	19	12	34	4.26
Defines and describes project goals			5	19	10	34	4.15
Communicates well in writing			6	13	14	33	4.24

TABLE 3.3 (Continued)

Skills	Frequency of Responses					Total Re- sponses	Aver- age Rating
	Rating		Scale				
	1	2	3	4	5		
Delegates to others tasks to be accomplished	1	2	10	15	7	35	3.71
Organizes staff, money, and other resources to accomplish project goals		1	7	16	10	34	4.03
Analyzes behavior or personality characteristics of different individuals	1	1	7	19	6	34	3.82
Directs and evaluates staff and the implementation procedures to accomplish goals	1	1	8	20	4	34	3.74
Analyzes problems and establishes alternatives to solve the problems			7	17	12	36	4.14
Organizes thoughts		1	6	17	10	34	4.06
Demonstrates creativity			11	13	10	34	3.97
Develops a positive staff morale			3	6	15	24	4.50
Totals	3	7	74	197	120	401	4.06
<u>Intrapersonal Skills</u>							
Is self-revealing	1	1	15	13	2	32	3.44
Tolerates ambiguity	3	6	10	9	4	32	3.16
Relieves tension by relaxing	1	4	18	6	4	33	3.24

TABLE 3.3 (Continued)

	Frequency of Responses						Aver- age Rating
	Rating		Scale			Total Re- sponses	
	1	2	3	4	5		
Feels optimistic and hopeful			4	16	13	33	4.27
Feels enthusiastic toward job			1	9	23	33	4.67
Feels self-confidence in self	1		1	18	14	34	4.18
Has a secure feeling toward self			2	16	15	33	4.39
Possesses the "will to win" (drive)			1	11	22	34	4.62
Has faith in staff		1	2	14	16	33	4.36
Possesses loyalty to project and overall organization or agency			1	11	21	33	4.61
Possesses courage		1	2	21	9	33	4.15
Totals	6	13	57	144	143	363	4.12
<u>Interpersonal Skills</u>							
Demonstrates flexibility and accepts change	1		4	18	11	34	4.12
Demonstrates tact in dealing with others		1	3	19	9	32	4.03
Is a good listener	1	1	10	12	9	33	3.82
Deals with "tense" situation calmly		3	4	21	4	32	3.94

TABLE 3.3 (Continued)

Skills	Frequency of Responses					Total Re- sponses	Aver- age Rating
	Rating		Scale				
	1	2	3	4	5		
Communicates well verbally when presenting information to a group			6	17	9	32	4.09
Communicates well in a group as a group participant			5	17	9	31	4.13
Expresses empathy (shows understanding)		1	7	19	7	34	3.94
Expresses respect (displays a caring attitude)			3	18	11	32	4.25
Expresses concreteness (being specific when communicating)		1	5	22	4	32	3.91
Expresses genuineness (being "real" as opposed to "phoney")			2	17	14	33	4.36
Demonstrates confronting skills (telling it "like it is")		1	6	17	8	32	4.00
Expresses immediacy (saying on the spot what is going on between you and another person, or what is going on in a group in which you are participating)		3	11	12	4	30	3.57

TABLE 3.3 (Continued)

	Frequency of Responses					Total Re- sponses	Aver- age Rating
	Rating		Scale				
	1	2	3	4	5		
Positively reinforces appropriate staff behavior and ignores or negatively reinforces inappropriate staff behavior	1	1	7	20	3	32	3.72
Demonstrates pride in staff accomplishments			2	7	22	31	4.65
Totals	3	12	75	236	124	450	4.04
Grand Average							4.05

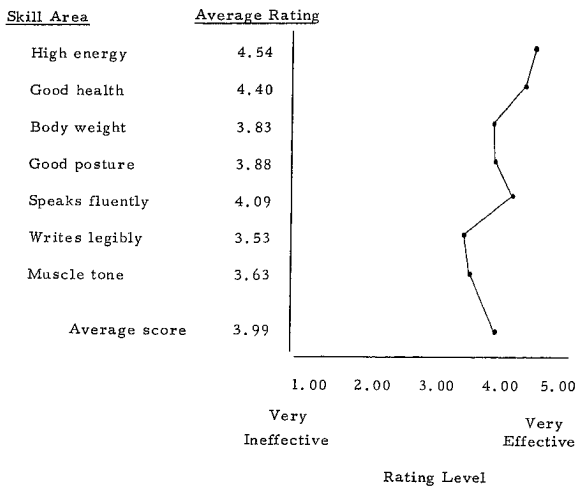
*The rating scale numbers refer to:

- 5 - Very Effective
- 4 - Effective
- 3 - Minimally Effective
- 2 - Not Effective
- 1 - Very Ineffective

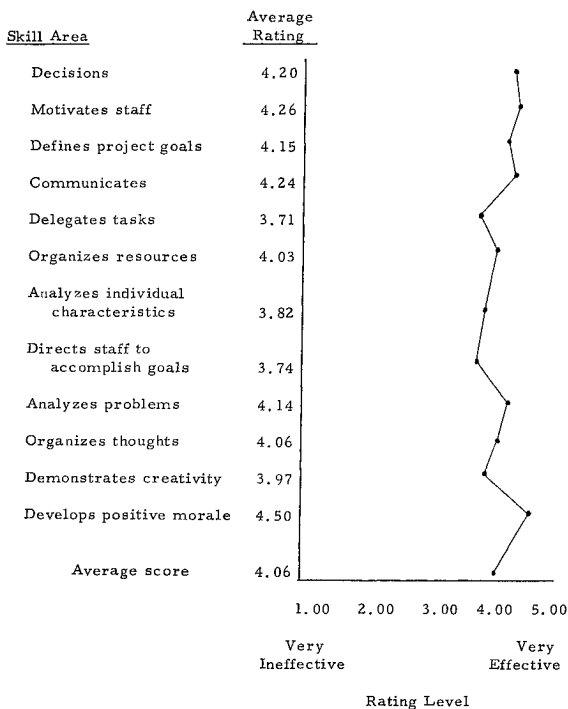
TABLE 3.4. --Project manager self-rating skill areas having averages above the grand mean rating

Skill	Average Skill Ratings Rank Ordered by Skill Area
<u>Physical</u>	
Possesses high energy level	4.54
Maintains good health	4.40
Speaks fluently and clearly	4.09
<u>Intellectual</u>	
Develops positive staff morale	4.60
Motivates staff to accomplish goals	4.26
Communicates well in writing	4.24
Makes needed decisions	4.20
Defines and describes project goals	4.15
Analyzes problems and sets alternatives	4.14
Organizes thoughts	4.06
<u>Intrapersonal</u>	
Feels enthusiastic toward job	4.67
Possesses "will to win" (drive)	4.62
Possesses loyalty to project and organization	4.61
Has a secure feeling	4.39
Has faith in staff	4.36
Feels optimistic	4.27
Feels confidence in self	4.18
Possesses courage	4.15
<u>Interpersonal</u>	
Demonstrates pride in staff accomplishments	4.65
Expresses genuineness	4.36
Expresses respect	4.25
Communicates well in a group	4.13
Demonstrates flexibility	4.12
Communicates well verbally	4.09

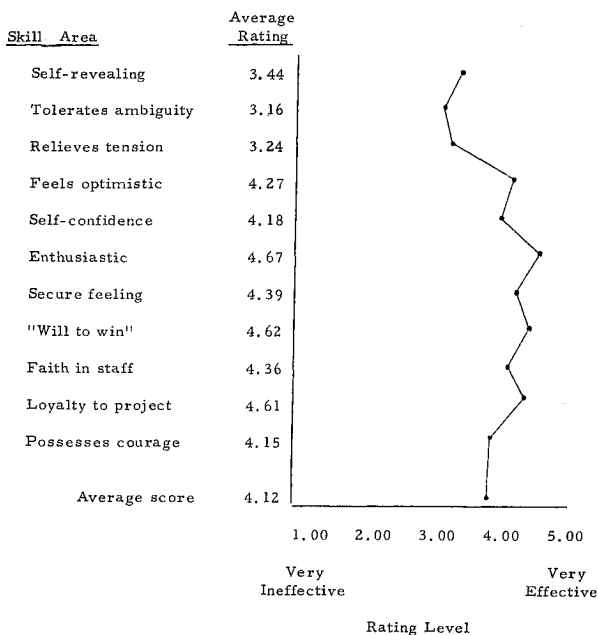
GRAPH 3.1. --Self-profile by project managers - physical skills



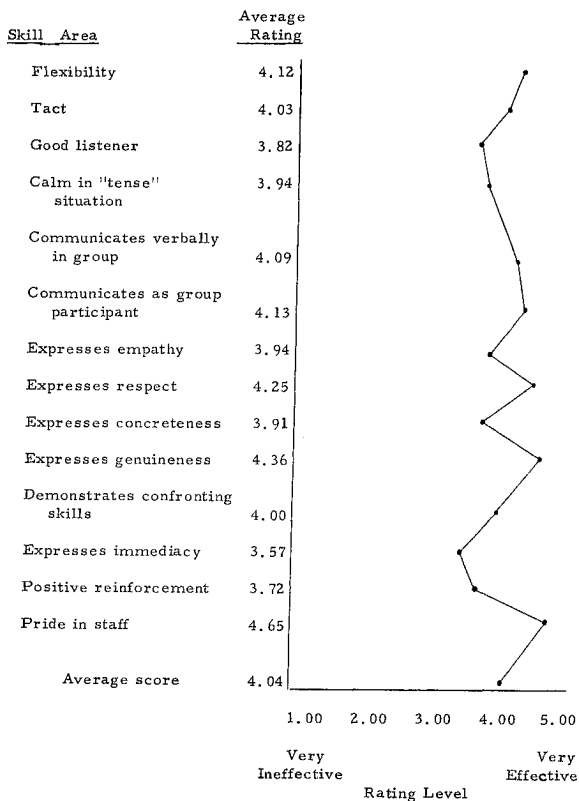
GRAPH 3.2. --Self-profile by project managers - intellectual skills



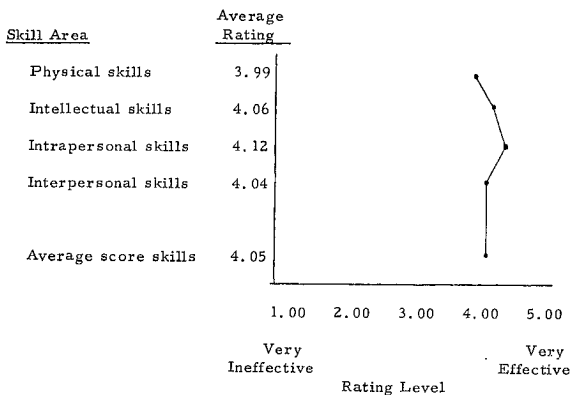
GRAPH 3.3. --Self-profile by project managers - intrapersonal skills



GRAPH 3.4. --Self-profile by project managers - interpersonal skills



GRAPH 3.5. --Self-profile by project managers - four skill areas



total average rating for all skills of 4.05.

Physical area. --The average of all ratings in the physical area was 3.99 (effective level). Average ratings ranged from a high of 4.54 for the skill, "possesses high energy level," to a low of 3.53 for the skill, "writes legibly."

Intellectual area. --The average of all ratings in the intellectual area was 4.06. Average ratings ranged from a high of 4.50 for the skill, "develops a positive staff morale," to a low of 3.71 for the skill, "delegates to others tasks to be accomplished."

Intrapersonal area. --The average of all ratings in the intrapersonal area was 4.12. Average ratings ranged from a high of 4.67 for the skill, "feels enthusiastic toward job" to a low of 3.16 for the skill, "tolerates ambiguity."

Interpersonal area. --The average of all ratings in the interpersonal area was 4.05. Average ratings ranged from a high of 4.65 for the skill, "demonstrates pride in staff accomplishments," to a low of 3.57 for the skill, "expresses immediacy."

The overall average for all ratings was 4.05 (effective level). Of the forty-four skills listed in all four skill areas, the ratings for twenty-four of the skills were higher than the 4.05 average. These skills are listed in Table 3.4.

Two of the skill areas had higher sub-total average ratings than the overall grand average of 4.05. The interpersonal skill

area sub-total average rating was 4.12 and the intellectual skill area sub-total average rating was 4.06. The interpersonal and physical skill area averages were less than the overall average score of 4.05. The sub-total average rating for the interpersonal skill area was 4.04 and for the physical skill area, 3.99.

The project managers responding to the questionnaire generally rated themselves in the effective category in performing most skills appropriately to facilitate personal and/or group growth toward a desired outcome. Twenty-four skills received an average rating of effective or better. Those skills receiving a rating of 4.50 or better were:

1. Feels enthusiastic toward job (4.67).
2. Demonstrates pride in staff accomplishments (4.65).
3. Possesses the 'will to win' (drive) (4.62).
4. Possesses high energy level (4.54).
5. Develops a positive staff morale (4.50).

Twenty skill scores ranged between 3.00 (minimally effective) and 4.00 (effective). Three skills grouped at the low end of the rating distribution. These skills and their average ratings are:

1. Tolerates ambiguity (3.16).
2. Relieves tension by relaxing (3.24).
3. Is self-revealing (3.44).

CHAPTER IV

MONOGRAPH

A Project Management System Model

What is project management? How does a project manager plan, initiate, and operate a project? What is the role of a project manager? What skills and knowledge are needed by a project manager?

These and other questions are answered in this practical step-by-step guide to managing a project. The monograph is intended for the use of managers of educational projects.

It is intended that each project manager use this monograph as a guideline for action. The monograph is not necessarily a complete guide nor will all who read it agree with everything presented. However, it is anticipated that the monograph can provide worthwhile information about project management and additional resources for further investigation. The monograph provides specific information and guidelines on many of the elements of project management, not all. Quotations and references imbedded in the monograph provide both support for content and incentive for additional study by the reader. It is further suggested that the monograph can be used in parts. As a project manager identifies a problem or need, a corresponding section

of the monograph can be used.

The monograph is divided into seven sections: Section One, the Project Management System Model; Section Two, Planning; Section Three, Programming; Section Four, Implementing; Section Five, Controlling; Section Six, Needed Knowledge, Understanding, Attitudes, and Skills; and Section Seven, Resources, Glossary and Guides.


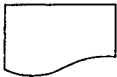


In Section One, the Project Management System Model is presented. In Sections Two, Three, Four, and Five, four organizational elements of a project management system are defined and described: Planning, Programming, Implementing, and Controlling. Each element is broken down further into steps or component parts. In each Section except Section Five a flow chart, check list of the needed steps and other forms are presented so the reader can systematically follow and use what is presented. Each of these Sections is organized using the same format.

In Section Six the knowledge, understanding, attitudes, and skills needed by project managers are described. Section Seven lists the more significant terms used in the monograph and sources of additional information for each. It also contains a glossary and sample guides for the task of planning, programming, implementing and controlling.

The flow charts in Sections Two through Four are graphic illustrations that demonstrate how the project management system

flows systematically step by step.

The following key defines the symbols used in the flow charts:

	Planning (why, what, when)
	Planning is preparing for future activities and events
	Programming (how, who, when)
	Programming is deciding how to accomplish the things that need to be done
	Implementing (go, no go)
	Implementing is putting into practice through a plan of action the programs that have been developed through effective allocation and utilization of resources
	Controlling (stop, so what)
	Controlling is the process that assures standards of performance are being met and that the implemented plan of action accomplished the desired results

Guides in the form of check lists, guidelines, and worksheets are provided in Section Seven of the monograph to assist both the thought processes of the project manager and formalize constructive action. The guides are identified by a prefix and a number relating to planning, programming, implementing, and controlling.

In Sections Two through Five the number of a guide that can be used for a specific step is listed at the end of the step for easy

reference.

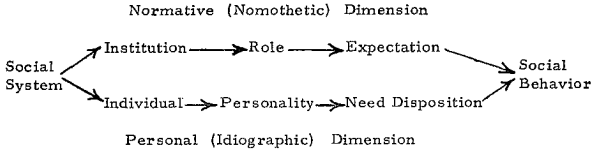
Section One. The Project Management System Model

Specialists writing in the area of management generally cite tasks related to planning, programming, implementing, and controlling as four of the task areas basic to project management. These four functions comprise the core of this monograph.

The management system model presented in this monograph is patterned after the Human Resource Development Model of Carkhuff (1969, 1971, 1972) and the Social System Model of Getzels and Guba (1957). A basic assumption is that all management functions operate interdependently through people.

Carkhuff explains that the equation for effective outcomes is dependent upon three elements: effective people, effective programs, and effective organization. Effective people have a high quantity and quality of specialty area skills and interpersonal skills. Further, effective people develop and use effective programs that systematically provide the steps needed to achieve the desired results. Carkhuff (1971) states, "effective organization is simply a means for relating effective people to effective programs in the most expeditious manner (p. 362)."

Getzels and Guba (1957) developed the following social system model:



The components include the institutional or organizational and individual elements that interact in a way to facilitate social behavior. The institutional or organizational elements include the roles and expectations for staff members. The individual elements consist of the distinct personalities and need-dispositions of the individuals in the organization. According to Getzels and Guba (1957), the interaction of the organization and individual elements lead to action and social behavior.

The project management system model was developed from the same functional components present in the Carkhuff and Getzels-Guba models. The components are people, programs, and organization. The components are interdependent and interact in a systematic flow of directed action. It is further proposed that human behavior and action in a project are accomplished through the organizational elements of planning, programming, implementing, and controlling. The management model assumes that human behavior and action are performed at a level by individual staff members depending upon their specific knowledge, understanding, attitudes, and skills. In essence,

a project is planned and organized by people who implement programs to accomplish goals.

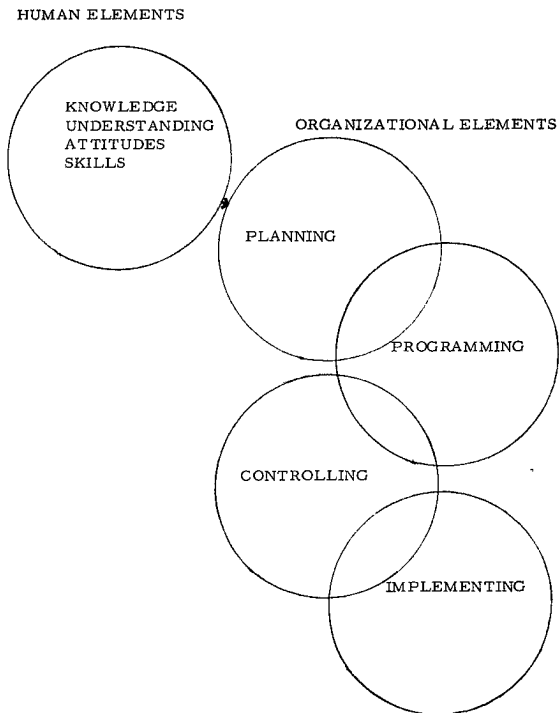
A graphic illustration of the elements of a project management system is presented in Figure 4.1. The illustration emphasizes the interdependence of the organizational elements and interrelatedness of the human behavior and action.

The project management system should first facilitate the development of an initial plan of what is to be done. Next, the system should provide a vehicle for developing and implementing programs which specify how to accomplish the goals. According to Cook (1971), ". . . it should provide a vehicle for monitoring and controlling the operation once the project is initiated (p. 186)."

The following list of general criteria for judging a project management system is adapted from a list by Cook (1971) and details what a good management system should do:

1. Provides for timely and accurate information to the project manager and his staff
2. Facilitates decision making in advance of performance
3. Facilitates effective planning before the initiation of the project
4. Accommodates necessary changes
5. Assures that all users understand the purpose, goals, and programs to achieve the goals
6. Provides for prudent utilization of all necessary resources (people, materials, equipment, facilities, and money)

FIGURE 4.1. --The five elements of a project management system



7. Facilitates goal and program development
8. Facilitates development of evaluation techniques and instruments prior to program implementation
9. Facilitates the identification and solving of problems
10. Provides a positive social climate for staff and clients
11. Provides for the growth of staff and clients toward goal accomplishment

Project managers may enter a project after it has already been approved for funding. Frequently the project manager is the principal developer of the proposal and subsequently becomes the project manager in charge of implementing the project. Regardless of the situation, this monograph is written so that project managers may adopt or adapt portions relevant to their particular tasks.

Section Two. Planning

Project leadership should have a defined course of action that translates project purpose to achievement of project goals. The structure of a program is determined initially through the planning process. Thus, the task of planning is to prepare the program structure. Elements of the task include: a needs assessment, setting the project purpose and goals, specifying alternative courses of action to accomplish the goals, selecting the best alternative courses of action, specifying contingency provisions, considering environmental factors, establishing a practical timetable, and establishing a preliminary budget to accomplish the goals.

Good planning is the initial task preceding programming, implementing, and controlling a successful project. Although not guaranteeing success, the likelihood is enhanced of a project accomplishing its desired end results. Therefore, the first planning function to be performed by a project manager is to determine the need for the project and, in general terms, how the need can be accomplished. Without planning, there is no formal direction. Without direction, project success potential is at the level of chance.

Steps in planning

The planning process is both creative and systematic. Fifteen steps represent the process:

1. Implement a needs assessment
2. Define the project purpose
3. Identify the project clients to be served
4. Describe the rationale or justification for the project
5. Set and prioritize project goals and objectives
6. Select the possible alternative courses of action and procedures to accomplish goals
7. Decide on the best alternative(s) to accomplish the goals
8. Recycle to check previous steps
9. List and describe contingency provisions
10. Describe the environmental factors within which the project will operate
11. Develop evaluation design

12. Decide on scheduling tools
13. Recycle to check previous steps
14. Develop budget
15. Assess planning steps

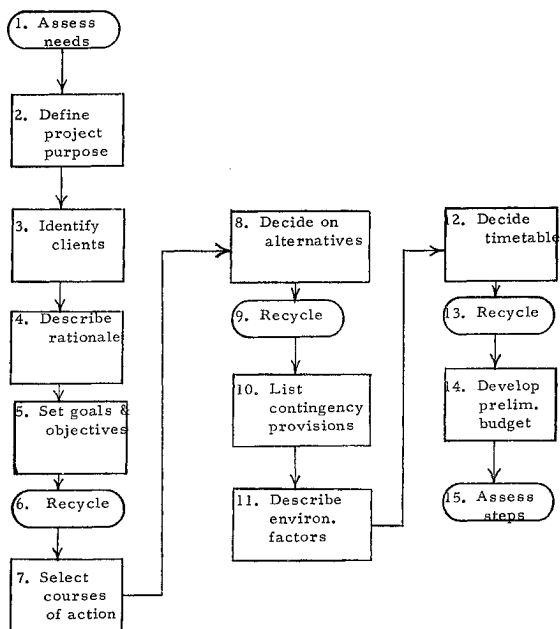
The linkage of these planning steps is illustrated in Figure 4.2.

Detailed descriptions of each step follows. Planning Guides represent forms, check lists, and descriptive guidelines are identified for specific planning tasks. Guides for planning, programming, implementing, and controlling are contained in Section Seven.

The Planning Guides are:

Planning Guide 1	Planning Steps Check List
Planning Guide 2	Ten Guidelines to Observe in Developing a Project Proposal
Planning Guide 3	Principles and Procedures for Creating Proposals for Special Funded Projects
Planning Guide 4	Allocation of Responsibilities for Special Projects
Planning Guide 5	Contents of Document for Presenting Proposal to Board
Planning Guide 6	Guidelines for Funding Source
Planning Guide 7	Goal Setting Worksheet
Planning Guide 8	Problem Solving-Decision Making Matrix Worksheet
Planning Guide 9	Project Calendar Worksheet
Planning Guide 10	Weekly List of Activities
Planning Guide 11	Budget Worksheet

FIGURE 4.2. --Steps in planning flow chart



Planning Steps

Step One: Implement a Needs Assessment. --Before a project is planned and implemented, a needs assessment should be implemented to determine: (a) the needs that should be met or problems solved by implementing the project; (b) the political climate in the community and school system in terms of its supportiveness and congruence to the project; (c) the community and school system expectations for the project in terms of what it should accomplish; (d) the probability of success of the project meeting the "needs"; and (e) how the project will fit into the overall policies and goals of the school system.

For more information on implementing a needs assessment, turn to Section Five on Controlling.

Step Two: Define the Project Purpose. --The project purpose should be stated in a concise manner which describes the designated intention of the project. The statement of purpose may vary in focus based on the primary causal factor for the development of the project. Example causal factors from which a project is subsequently developed and implemented include a problem that needs to be resolved, an acceptable idea, an educational need. The project manager should ensure that the primary causal factors that lead to the development of the project are addressed in the stated project purpose. (For reference see Planning Guide 7)

Step Three: Identify the Project Clients to be Served. --Project clients are the target group that are to receive the benefits of the

project. A brief but inclusive statement should suffice. The statement should include the number of clients, educational level, and any other pertinent information. For example, "the target group for the project is all 500 students in grades kindergarten through six." (For reference see Planning Guide 7)

Step Four: Describe the Project Rationale or Justification for the Project. --The rationale defines why the project is to be developed and implemented. The project rationale is essentially the "why" of the project which stems from the causal factors and anticipated outcomes. For example: a problem; an acceptable idea; an educational need. The rationale should include pertinent historical and background information. (For reference see Planning Guide 7)

Step Five: Set and Prioritize the Goals and Objectives. --The foundation of a project is represented by the project goals. Realistic and defensible goals provide project direction. Project goals are derived through analyzing the project purpose, clients to be served, and rationale for the project. For the purposes of this monograph, the definition of project goal, according to the Michigan State Department of Education (1971) is a statement of broad direction and general purpose without reference to time or specific behavior.

The tasks of developing appropriate goals and objectives are properly shared by project management and staff. Project goals typically represent the needs addressed by the project. Project

objectives relate to a goal. They typically partition into management or staff (process) objectives and client performance (outcome) objectives. Gronlund (1970) is a recommended reference to assist in the objectives setting process. For the purposes of this monograph, the definition of project objective, according to the Michigan State Department of Education (1971), is a statement which describes specific activities and behaviors.

The project goals should be ranked from most to least important. A prioritizing method should be used. Many methods of ranking items are available, including versions of the Delphi process and the SUG method. The Delphi process is designed for anonymous interaction of group members to reach consensus by using a series of steps. At the beginning of each step, the individuals involved are told the results of judgments made at the end of the previous step. Subsequently, extreme judgments are required to be justified, and consensus is ultimately achieved. The SUG method attempts to set priorities based on weighting the different alternatives on the basis of their seriousness, urgency, and growth potential for being a problem. Said another way, those situations or activities that are the most serious, urgent, and have the greatest potential for creating problems are the most important. Group members may or may not participate with project management. Participation by staff with management is the preferred relationship.

Once goals have been prioritized, then objectives should be

prioritized for each goal, using similar prioritizing procedures. Additional information on setting priorities is presented in Section Seven.

Individual staff objectives. --The individual staff objectives are specific statements concerning instructional and supportive staff objectives. These objectives assist each staff person in determining his responsibilities and performance specifications that help accomplish the overall goals and achieve the desired client performance.

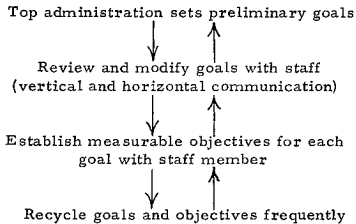
Staff objectives may be of three types: regular or routine objectives (performance measured by comparison with standard); problem-solving objectives (performance measured by effective solutions to problems); innovative objectives (measured by productive changes sought and achieved in time).

Client performance objectives. --The client performance objectives are a communication device for expressing in specific performance terms the intended terminal client behavior.

Purpose of goals and objectives. --The purpose of establishing goals and objectives is to direct staff behavior toward anticipated outcomes. Inherent in setting goals and objectives is the assumption that staff and clients will perform more effectively if they know, understand, and agree with what is expected of them. Establishing goals and objectives can complement the growth and development of the people involved. A project manager has a responsibility to consult

the instructional and supportive staff members and, if appropriate, the clients in setting goals and objectives.

A strong supportive structure is obtained when goals are established at the top echelon of an organization and are filtered down and back up the organizational structure. The process can be a learning experience and a way of arriving at goals that more closely correlate with the individual needs, goals, and personalities of the project staff and clients. A flow diagram of the goal setting-feedback process follows:



An assumption of this project management model is that effective project managers participate in planning by giving ideas to and receiving ideas from subordinates. It is also important that communication between subordinates take place. Expectations are that better results will occur if the project staff members have an opportunity for input into the goal and objective setting process. (For reference see Planning Guide 7 and Programming Guide 8)

Step Six: List Possible Alternative Courses of Action and Procedures to Accomplish Goals. --During this step, viable alternatives should be listed. One possible technique that can be used to generate alternatives is a simple brainstorming session with staff where all ideas are listed. However, if the staff has not been hired, it may be the responsibility of the project manager to formulate the alternatives.

Step Seven: Decide on the Best Alternatives to Accomplish the Goals. --The project manager will need to use a decision-making routine to arrive at the most acceptable alternatives. (For reference see Planning Guide 8 and Example Planning Guide 8)

Step Eight: Recycle to Check Previous Steps. --Recycling means to review each step that has been previously completed to determine if modifications are needed before proceeding to the next step. The steps involved in recycling are: (a) review and analyze the plans, programs or results of each previous step with the appropriate people; (b) decide whether or not modifications are needed in any of the steps; and (c) move to the next step. (For reference see Controlling Guide 2)

Step Nine: List and Describe Contingency Provisions. --It is important to identify anticipated problems and contingency courses of action and procedures. The important thing for a project manager to remember is to spend time thinking about and listing the contingency provisions before problems occur.

Step Ten: Describe the Environmental Factors Within Which the Project Will Operate. --Frequently, projects must operate within already established buildings which may or may not be suitable. As a consequence, it is vital that the project manager identify what is needed in terms of facilities and equipment, and attempt to make necessary modifications if needed. Regardless of the situation, care should be taken to secure adequate facilities and equipment.

Step Eleven: Develop Evaluation Design. --Regardless of the evaluation method, evaluation is a must. It is essential that information be available to determine the level of objective accomplishment.

Evaluation should also provide information for decision making based on the following criteria (Stufflebeam, 1971):

Validity--is the information what the decision maker needs?

Reliability--is the information reproducible?

Timeliness--is the information available when the decision maker needs it?

Pervasiveness--does the information reach all decision makers who need it?

Credibility--is the information trusted by the decision maker and those he must serve?

For more information about evaluation, refer to Sections Five and Seven.

Step Twelve: Decide on a Practical Timetable. --It is important that activities to reach a goal be listed along with the starting and completion dates. The planning process would be incomplete without this

step. The project manager and staff should establish a realistic timetable so that all people involved will be aware of when the different components of the project should be completed. (For reference see Planning Guide 10)

Step Thirteen: Recycle to Check Previous Steps. --Refer to Step Eight and Section Five.

Step Fourteen: Develop a Budget. --The final budget may not be able to be completed until the programs are written during the programming phase. Budgets often must be developed and submitted to the funding agency prior to a project manager or staff being hired. As a result, a project manager would start with an established budget. Subsequently, the project manager should modify the budget if needed based on the results obtained during the planning and programming phases. It may be necessary to change the budget during the implementation phase. A budget is a planning tool that helps a project manager allocate resources and decide on the costs of needed human and non-human resources. The budget, therefore, should be determined on the basis of the resources needed to accomplish the project goals. (For reference see Planning Guide 11)

Step Fifteen: Assess Planning Steps. --Before proceeding to the programming phase, it is important to assess all the planning steps and to modify them if necessary. This step acts as a control on the planning phase and helps build in success.

Section Three. Programming

Programming is a process of developing systematic programs to accomplish project goals and objectives. Programming includes: establishing the delivery system, selecting and training staff, allocating and structuring resources, finalizing the budget, developing an effective human relations program, and developing methods to solve problems. Programming for a project manager is determining what tasks need to be performed to accomplish the project goals and objectives. Programming is the next step in the project management system and expands what was done in the planning step.

Steps in programming

The following eighteen steps in programming are identified:

1. Understand goals
2. Develop list of tasks to be accomplished
3. Develop job descriptions
4. Decide on and develop organizational chart
5. Recycle to check previous steps
6. Secure candidates for available positions
7. Decide on questions to ask candidates
8. Schedule and conduct interviews
9. Select best candidates for available positions
10. Develop and implement an orientation and training program

11. Develop the delivery system
12. Recycle to check previous steps
13. Develop communication and dissemination system
14. Develop plans for effective human relations
15. Develop methods for problem solving
16. Finalize timetable
17. Finalize budget
18. Assess programming steps

The linkage of the programming steps is illustrated in Figure 4.3.

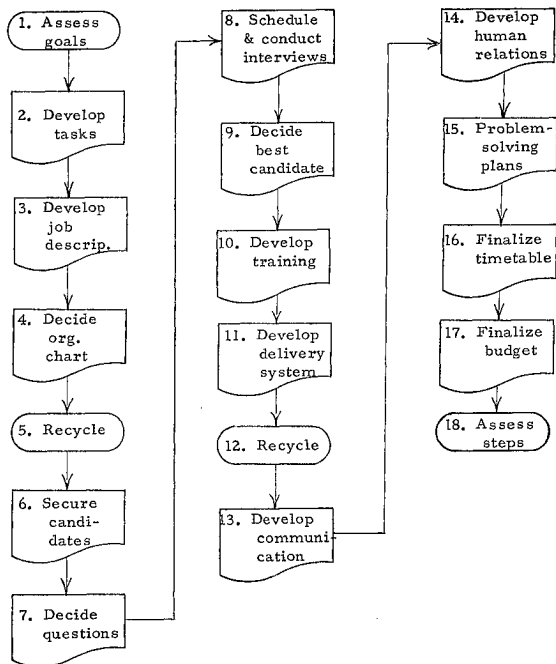
The Programming Guides identified at particular steps may assist the reader in working through the programming phase. Programming Guide 1 may be used as a controlling device to assure each step in the programming process is completed.

Each of the other Programming Guides listed below can be used for specific steps and each is listed in the more detailed description of each step that follows.

The Programming Guides are:

Programming Guide 1	Programming Steps Check List
Programming Guide 2	Task List Worksheet
Programming Guide 3	Job Description Worksheet
Programming Guide 4	Example Organizational Chart
Programming Guide 5	Interview Questions Worksheet
Programming Guide 6	Worksheet for Developing Staff Orientation and Training

FIGURE 4.3. --Steps in programming flow chart



Programming Guide 7	Worksheet for Developing Staff Objectives
Programming Guide 8	Project Programming Guide
Programming Guide 9	Program Development Worksheet
Programming Guide 10	Communication Matrix Worksheet
Programming Guide 11	Dissemination Worksheet
Programming Guide 12	Program Calendar Worksheet

Programming Steps

Step One: Understand Goals. --The project goals must be completely understood by those directly or indirectly involved in the project so that effective programs can be developed to accomplish the goals and their objectives.

Step Two: Develop List of Tasks to be Accomplished. --The tasks should be worded so that jobs or positions can be identified for a grouping of the tasks. The tasks provide the basis for developing job descriptions and are the major performance responsibilities which constitute particular jobs. (For reference see Programming Guide 2)

Step Three: Develop Job Descriptions. --The suggested components of a job description include:

Specific job title

Salary range of job

Position of the job in terms of the chain of command and brief description of general responsibilities

Responsibilities or tasks which make up the job stated so that performance can be evaluated on the basis of quality and

quantity standards

Examples of work for illustration only

Specific type and level of knowledges, understandings, and attitudes and skills required for the job

Acceptable experience and training

States the terms of employment and performance appraisal criteria and techniques to be used

Provision for a review procedure and employee's acknowledgment of the details of his job description previous to evaluation of his performance

(For reference see Programming Guide 3)

Step Four: Decide on and Develop Organizational Chart. --An organizational chart is a graphic representation of the horizontal and vertical hierarchy of the human resources involved directly in the operation of the project. The organizational chart is a necessity for communicating to people within and without the project how the various people are organized to accomplish the project goals and objectives.

(For reference see Programming Guide 4)

Step Five: Recycle to Check Previous Steps. --Refer to Sections One and Five for recycle step suggestions.

Step Six: Secure Candidates for Available Positions. --This step and the next steps vary in terms of project manager responsibility. The project manager's responsibility will depend upon the size of the administrative staff of the organization administering the project. Frequently there is a personnel officer who provides much of the staff

work needed in recruiting staff. Nevertheless, a project manager should be aware of what is required to recruit staff.

First of all, the available positions should be advertised. In advertising the positions, the following points should be considered: how should the available positions be advertised and what sources of help should be used in advertising the available positions?

After the people interested in the available positions communicate their interest, applications for employment should be sent to them. Based on pre-set evaluative criteria, it is suggested that a simple decision-making routine be used to narrow down the number of applicants. The best candidates for the available positions should then be scheduled for interviews. (For reference see Planning Guide 8 and Example Planning Guide 8)

Step Seven: Decide on Questions to Ask Candidates. -- The project manager should list the questions to ask in the interview. The questions should be consistent for each candidate so that objective analysis of each candidate can be achieved. It is advisable to have more than one person involved in interviewing each candidate.

The following list can be used as a checklist to follow in designing questions. The questions should permit analysis of: the candidate's verbal communication skills, the candidate's knowledge that directly relates to the available position, the candidate's understanding of how to function in the available position, the candidate's overall attitude

toward the project, school system, administration, and clients to be served, and the candidate's background, experience, and significant accomplishments that demonstrate satisfactory or outstanding skills and effectiveness. (For reference see Programming Guide 5)

Step Eight: Schedule and Conduct Interviews. --In scheduling the interviews, care should be taken to structure enough time to schedule all the necessary activities. The schedule should be specific and pre-determined before contacting the candidates.

In conducting the interview, the project manager should be conscious of his or her actions. It is vital for the project manager to prepare for the interview. In addition to selecting the best candidate, it is important to sell the candidate on the project and position.

Step Nine: Select Best Candidates for Available Positions. --The best candidates should be notified and offered employment. If the candidates accept, the candidates not selected should be notified of the results.

Step Ten: Develop and Implement an Orientation and Training Program. --An obligation of the project manager is to orient and provide training for new employees. An orientation and training program should be developed. The program should provide the opportunity for all new employees to learn the necessary information about the school system, project, and their jobs. Frequently, orientation and training sessions are conducted through group meetings or in-service education sessions.

Regardless of the methods, it is recommended that training sessions with staff be conducted periodically, not just at the beginning of the project. (For reference see Programming Guide 6)

Step Eleven: Develop the Delivery System. --In developing the delivery system, it is essential for the project staff to understand the project goals. It is from these goals that the individual staff objectives and client performance objectives should now be developed.

A delivery system is a set of activities, human resources, and non-human resources organized into programs and subsequently implemented to achieve the project goals and objectives. The focus of the delivery system in the monograph is on the relationship or interface between the project manager and staff. There are two distinct levels in a delivery system. First is the level involving the project manager and staff. The other is the level involving the staff and clients.

An effective delivery system is one that directly leads to the acceptable accomplishment of the project goals and objectives based on specific evaluative criteria. Aspy (1972, p. 7) states that there are three stages of production: "(1) input, (2) process, (3) outcome or (1) Where did we start?, (2) What did we do?, (3) Where did we finish?" An effective delivery system helps a project manager answer the previous three questions while correspondingly leading to goal accomplishment.

It should be noted that a critical component of the delivery system

is the people involved and the development of programs that will accomplish the goals and objectives. Carkhuff (1971, p. 101) states ". . . the equation for delivery in designs for success is as follows: effective personnel + effective programs = effective outcome." To summarize, a program is a systematically organized and implemented series of tasks, activities, and events designed to achieve the project goals and objectives. According to Carkhuff (1971), the systematic programs must build in success. Said another way, the programs must be achievable.

The following check list may be used as a general guide in developing programs. The check list has been adapted from the work of Carkhuff (1971). The steps in program development are:

1. Understand what a program is before proceeding
2. Define the general problem or subject area for which a program is to be developed
3. Define the goals for which a program is to be developed
4. Describe why the goal is important
5. Identify and list the implementation steps in order of when they need to occur
6. Identify and list the procedures and methods to be used
7. Identify and list the needed resources
8. In implementation, begin with the least difficult behavior first, moving to succeeding more difficult behaviors
9. In implementation, provide opportunity for repetition of specific behaviors over and over until mastered.

10. In implementation, provide opportunity for review of all previous behaviors after mastery of each new behavior

If programs are to be successful, the achievement of the most difficult behavior is dependent upon achievement of all simpler behaviors. Success is dependent upon movement from the more simple behaviors to the more complex. The key to success is to master each behavior systematically. Carkhuff states (1971):

The most important single variable in the effectiveness of a program, then, is the level of functioning of its implementers. While the system of a program has its own distinctive contributions to make, the success of the program stands or fails primarily on the effectiveness of the individuals who are conducting it (p. 132).

(For reference see Programming Guides 7, 8, and 9)

Step Twelve: Recycle to Check Previous Steps. -- Refer to Sections One and Five for recycle suggestions.

Step Thirteen: Develop Communication and Dissemination System. -- There are volumes written on the subject of communication. It is not the purpose of the monograph to go into detail about the principles of communication here. Section Seven provides resources for further study.

Communication is a two-way process. There must be a sender and a receiver of verbal and non-verbal information. Without a sender transmitting information and a receiver responding to the information, there is no communication.

A project manager must decide whom to communicate with and how to disseminate information and by what means. The following steps can be used by a project manager as a checklist:

1. What do I want to communicate?
2. To whom do I want to communicate?
3. Why do I want to communicate the message, or what is the purpose?
4. When do I need to communicate the message?
5. Where will I communicate the message and to how many people?
6. How will I communicate the message, or what communication medium will I use?
7. Who will do the developing of the message and subsequent presentation?
8. How will the costs incurred be financed, and is there sufficient funding for what is planned?

Another important element of a project is the dissemination of information. A project manager should use the dissemination process as a means of promoting understanding and support for the project.

Dissemination falls into the two distinct communication mediums of interpersonal (or face-to-face) and mass media (Michigan Department of Education, Elementary and Secondary Education Act Title III, 1972). Interpersonal communication includes: visitations, seminars, workshops, conferences, telephoning, two or more people exchanging comments, demonstrations, and others. In all cases in face-to-face

communication, there are opportunities for immediate feedback from the receivers. Mass media communication includes: television, radio, newspapers, professional journals, monographs, brochures, curriculum guides, films, slide-tape presentations, newsletters, and others. Interpersonal communication is generally considered to be the most effective means of communication. However, the mass media methods should also be used for large group contact. The people to whom the communication is aimed should help determine the methods.

In conclusion, a project manager should look at the communication and dissemination process as ongoing. Said another way, the process involves: 1) initial communication, 2) occasional and regular communication, 3) dissemination of the final results after the fiscal year is completed. (For reference see Programming Guides 10 and 11)

Step Fourteen: Develop Plans for Effective Human Relations. --

Creating a climate in which the project manager and staff can effectively work together is vital. Once the project staff has been hired, the project manager should help the staff succeed.

Herzberg, Mausner and Snyderman (1959) distinguish the different factors influencing job satisfaction and job dissatisfaction. The results of a study they conducted disclosed the factors affecting long-range attitudes were the major factors in producing good job attitudes and are the primary job satisfiers. The job satisfier

factors in order of effect were: work itself, responsibility, advancement, achievement and recognition.

The following factors listed in order of greatest effect were the major job dissatisfiers: company policy and administration, supervision (both technical and interpersonal relationships), working conditions and salary.

Herzberg, Mausner and Snyderman (1959) state:

We can expand on the previous hypothesis by stating that the job satisfiers deal with the factors involved in doing the job, whereas the job dissatisfiers deal with the factors that define the job context. Poor working conditions, bad company policies and administration, and bad supervision will lead to job dissatisfaction. Good company policies, good administration, good supervision, and good working conditions will not lead to positive job attitudes. In opposition to this, as far as our data have gone, recognition, achievement, interesting work, responsibility, and advancement all lead to positive job attitudes. Their absence will much less frequently lead to job dissatisfaction (p. 82).

A project manager must be aware of what motivates people to work and behave in different ways and should help provide a working climate in which all people directly or indirectly involved can effectively work together.

Step Fifteen: Develop Methods for Problem Solving. --Anticipating potential problems and preparing for them is a necessary step in programming. According to Likert (1961, p. 211), ". . . the quality of the decisions of an organization rests squarely on the adequacy and accuracy of the facts available to those who make its decisions."

An important function for a project manager is to analyze problems and make decisions on how to solve the problems. According to Cook (1971), a manager must, first of all, understand the difference between problem analysis and decision making. The basic steps the project manager should be aware of in problem analysis and decision making include:

1. Define and describe what is wrong (problem).
2. Define and describe what made the problem (cause).
3. Define, describe, and decide what to do to correct the problem (decision).

It is further recommended that the steps in program development alluded to in Programming Step Eleven be used after the solution has been identified. The program development steps will assure the solution is well planned and programmed before being implemented. (For reference see Planning Guide 8, Example Planning Guide 8 and Programming Guide 9)

Step Sixteen: Finalize the Timetable. --The timetable for implementing the programs should be finalized to represent who does what and when it will occur. (For reference see Programming Guide 12)

Step Seventeen: Finalize the Budget. --Budgeting permits analyzing the cost of the many functions or activities that must be performed. Implicit in finalizing the budget is the necessity of modifying goals and

programs based on a cost-benefit analysis which includes identifying priorities. Frequently, all the human and non-human resources programmed cannot be implemented because of inadequate financial resources. As a result, it is necessary to determine the most important goals and programs before finalizing the budget.

According to Cook (1971), the budget process permits a project manager to make critical examination of the goals, programs, and costs of the project. The budget is a planning and programming tool and should be dynamic as a guide to day-to-day management decisions. (For reference see Planning Guide 11)

Step Eighteen: Assess Programming Steps. --The final step in programming is to recycle and analyze all the previous steps to determine if all programming steps have been covered adequately. Subsequently, the programs should be implemented.

Section Four. Implementing

Implementing is a process of carrying out the programs developed to reach the project goals. Implementing includes: effective system delivery, effective system communication, effective human relations and effective problem solving.

Implementing is the next step in the project management system and expands what was done in the planning and programming steps. Implementing emphasizes utilizing the available resources to imple-

ment the programs developed during the programming step.

Nine steps are identified in implementing:

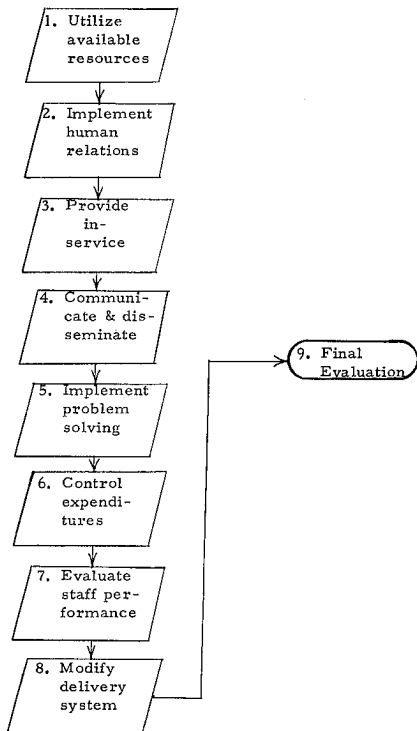
1. Utilize available resources to implement programs
2. Implement effective human relations
3. Provide in-service education for staff
4. Communicate and disseminate information to public
5. Implement effective problem solving and decision making
6. Control and assess expenditures
7. Evaluate staff performance
8. Modify delivery system and goals
9. Final evaluation of end results

Most of the implementing steps are ongoing and may operate concurrently. As a result, Figure 4.4, Steps in Programming Flow Chart, is structured differently than the preceding planning and programming flow charts in Sections Two and Three.

Routines and guides presented for Planning and Programming in Sections Two and Three may be appropriate for implementing tasks. Implementing guides specific to tasks in the implementing steps are:

- Implementing Guide 1 Implementing Steps Check List
- Implementing Guide 2 Check List of Useful Guidelines for Effective Groups
- Implementing Guide 3 Good Group Participant Questionnaire
- Implementing Guide 4 Group Leaders Meeting Guide
- Implementing Guide 5 Team Development Scale

FIGURE 4.4--Steps in implementing flow chart



Implementing Guide 6 Project Manager Steps for Effective Staff Performance

Implementing Guide 1 may be used as a controlling device to assure each step in the implementing process is completed.

Implementing Steps

Step One: Utilize Available Resources to Implement Programs. --

During the programming phase, the available resources are structured into programs to accomplish the project goals and objectives. During the implementation phase, the resources are utilized.

To reiterate, the formula for goal accomplishment is effective people using effective programs. The most important component is people. According to Halpin (1966), the successful leader of people must further group maintenance and group achievement. Halpin justifies his premise based upon evidence from numerous inquiries which show that effective leadership is characterized by high initiation of structure and high consideration. He states:

Initiating Structure refers to the leader's behavior in delimiting the relationship between himself and members of the work-group, and in endeavoring to establish well-defined patterns of organization, channels of communication, and methods of procedures. Consideration refers to behavior indicative of friendship, mutual trust, respect, and warmth in the relationship between the leader and the members of his staff (p. 39).

A project manager's main concern during the implementation process is to get the most effective and efficient utilization of avail-

able resources. A project manager should also be concerned with helping people to be satisfied and successful in their jobs.

In the remaining part of this step, two elements affecting the utilization of available resources will be emphasized. The elements are the manager's role and group activities.

Manager's Role. --It is suggested that a project manager assume the following roles during the implementing phase:

Planner:	look ahead and anticipate or avoid problems
Coordinator:	help organize staff meetings and other group activities involving personnel directly or indirectly involved in the project
Analyzer:	improve efficiency and effectiveness through better utilization of resources
Leader:	assume leadership and responsibility for decision making and overall responsibility for the project

Group Activities. --According to McGregor (1960), it is the manager's job to arrange organizational conditions and methods of operation so that people can achieve their own goals best by directing their efforts toward organization objectives.

The following list of nine guidelines for utilizing resources is adapted from a list of guidelines by Brown (1961). The guidelines may be of assistance to a manager in effectively using resources. The guidelines are:

1. There are no one-man decisions. Any kind of decision will eventually involve others.

2. Even those at the lowest echelons of the project, drawing the lowest pay, may have a significant influence upon what takes place.
3. If the client ultimately determines the shape of the project, then those dealing with the client become persons of substantial influence.
4. Problem solving and decision making can be improved more by finding ways and means by which others may be involved as opposed to the improvement of the project manager's performance.
5. The time and attention given to the involvement of others may be costly, but not so costly as the failure to carry out the decisions. This failure is the price that is nearly always paid by autocratic administration.
6. There are many blocks to effective project performance. The intelligent project manager will try to understand and remove them.
7. Communication is the medium through which project staff are helped to understand each other. No project can be really effective without an effective communication system.
8. It is usually more dangerous to act without sufficient knowledge than to slow down the process while information is being obtained.
9. Finally, people will support what they help to create. If they are invited into the decision-making process, they are likely to feel more responsibility for the decisions that are made.

(For reference see Implementing Guides 2, 3, 4, 5, and 6)

Step Two: Implement Effective Human Relations. --An important

function of a project manager is to motivate and stimulate an "esprit de corps" or team concept in the project. Step Fourteen in the programming phase and Section Seven contain additional information

about human relations.

The work of Carkhuff (1971) is again emphasized as a model for human relations. He concludes that research on the contribution of interpersonal skills in developing human resources indicates that all human interaction can have constructive or deteriorative consequences for the individual seeking help, assistance, or direction. Whether the consequences are constructive or destructive is related to the interpersonal skills of the person giving the help, assistance, or direction. (For reference see Implementing Guides 2, 3, 4, 5, and 6)

Step Three: Provide In-Service Education for Staff. --In-service education programs should be continued for the purpose of growth and development of staff members during the implementation phase. Programming, Section Three and Section Seven provide further information for this step. (For reference see Programming Guide 6)

Step Four: Communicate and Disseminate Information to Public. --The programming steps relating to dissemination of information and communication are implemented during the implementation phase. Programming, Section Three and Section Seven provide further information. (For reference see Programming Guides 10 and 11)

Step Five: Implement Effective Problem Solving and Decision Making. --The problems anticipated and problem-solving and decision-making techniques developed during the planning and programming phases are appropriate during the implementation phase. (For reference

see Planning Guide 8)

Step Six: Control and Assess Expenditures. --The majority of the project costs will be incurred during the implementation phase. Care should be taken to use the budget as a planning and controlling tool. It is vital for any project to have a realistic budget, for expenditures to be recorded properly and for the accounting system employed to have all the necessary controls. For further information about budgets, refer to Section Seven.

Step Seven: Evaluate Staff Performance. --Section Five on Controlling presents techniques for evaluating or appraising staff performance. (For reference see Programming Guide 4 and Controlling Guides 3 and 4)

Step Eight: Modifying Delivery System and Goals. --As in the other phases, it is important to recycle all activities and continue to determine if the project programs are on target. If needed, the project goals and objectives, timetables, and programs should be modified to incorporate improvements and changes. (For reference see Controlling Guide 2)

Step Nine: Final Evaluation of End Results. --Ultimately, the fiscal year-end results of any project must be objectively evaluated based on the evaluation system designed during the planning phase. The next section on Controlling and Section Seven provide more information.

Section Five. Controlling

Controlling is a process of establishing standards of performance and conducting regular follow-up to assure the standards are being met. Controlling includes: needs assessment, project evaluation, staff performance appraisal, and recycling of goals and programs. Controlling is exercised at different points in the project. In essence, controlling is a part of each of the other three management system elements. A flow chart is not included in this section since the steps or components of controlling have already been included in the previous sections.

Controlling is the process of regularly exercising influence to assure that the planning, programming, and implementing phases are executed as expected. A project manager should involve staff in setting the project goals, standards, and measures of performance so that staff have the means for self-direction, self-discipline, and self-control. The principles described by McGregor (1960), in his work developing Theory Y, emphasized that the motivation, the potential for development, the capacity for assuming responsibility, and the readiness to direct behavior toward project goals are all present in people. It is the responsibility of a project manager to make it possible for people to recognize and develop needed human characteristics and skills.

Controlling Components

There are four components in controlling: needs assessment,

recycling, staff performance appraisal and project evaluation.

Cook (1971) identifies a control formula that is helpful in detailing the components of controlling. Cook's control formula involves:

1. Adopting a plan that establishes time, cost, and performance standards
2. Measuring and reporting progress against those standards
3. Noting deviations from standards and taking corrective actions
4. Implementing corrective actions by recycling the plan as needed (p. 161)

The following Controlling Guides may assist in providing necessary controls.

Controlling Guide 1	Controlling Check List
Controlling Guide 2	Recycling Check List
Controlling Guide 3	Worksheet for Evaluating Performance
Controlling Guide 4	Worksheet for Staff Appraisal of Results
Controlling Guide 5	Performance Review Analysis Check List
Controlling Guide 6	The CIPP Evaluation Model

Each of the above Controlling Guides except number one are incorporated in the more detailed description of each component which follows. Controlling Guide 1 should be used as a general check list.

Component One: Needs Assessment. -- The needs assessment is a vital first step that occurs during the planning phase. It will assist

the school administration and board in determining the need for initiating the project. The result of the needs assessment should also help determine the expectations for the project. The major difficulties of a complete needs assessment are the time commitment required and cost. Steps in conducting a needs assessment are:

1. A problem, idea, or need is subjectively identified by an individual or group of individuals.
2. The information is presented verbally or, preferably, in writing to the top administrator followed by a meeting to secure time release for personnel and funding to conduct a needs assessment.
3. If approved, allocate human resources based on a statement of purpose, goals, and a step-by-step program to conduct the needs assessment.
4. Develop a program including any instruments needed such as questionnaires or surveys to carry out the needs assessment.
5. Develop and present a budget for the cost and calendar of activities and events to the top administration.
6. If approved, implement the needs assessment program; if not approved, modify it.
7. Analyze results.
8. Describe the conclusions and findings and review with top administration and board.
9. If approved by the top administration and board, begin planning the project. If not approved, modify and re-submit to the top administration.

Component Two: Recycling. -- Recycling has been described in previous sections, particularly in the planning phase, and will not be

developed further in this section. Refer to Step Eight in the Planning Section if additional information is needed. (For reference see Controlling Guide 2)

Component Three: Staff Performance Appraisal. --Staff performance appraisal should be based on each staff member's specific job. The purpose of performance appraisal is to maintain or improve staff performance. Specific job responsibilities and objectives are the benchmarks in appraising performance. It is suggested that staff performance be appraised about halfway through the project year and then again at or near the end of the project year. The appraisal should be in writing, and the appraiser and staff member being appraised should review performance together. The appraisal should be signed by each party to indicate the appraisal has been reviewed and mutually accepted.

There are specific principles to be recognized by project managers when appraising staff performance. Seven principles are:

1. Emphasize the staff member's strengths, not weaknesses
2. Stress achievement of expected end results
3. Help staff members recognize their strengths and weaknesses and plan together the staff members' personal development program
4. Emphasize positive feedback based on staff member accomplishments.
5. Avoid personal prejudices and judgments based on a subjective frame of reference; appraise the staff member's job

6. Be fair, thorough, and open-minded during the performance appraisal
7. Have the courage to respond openly and honestly to the staff member and to take any necessary action

(For reference see Controlling Guides 3, 4, and 5)

Component Four: Project Evaluation. --This monograph does not go into detail on project evaluation. In most projects the evaluation is conducted by an outside evaluator. However, there are projects in which the evaluation is executed by a project manager and/or staff.

Suffice it to say, it is a must to evaluate the delivery system and end results achieved. The work of Stufflebeam (1971) is given special attention. Stufflebeam defines evaluation as ". . . the process of delineating, obtaining, and providing useful information for judging decision alternatives (p.40)." He continues by emphasizing evaluation methodology which includes four functions: collection, organization, analysis, and reporting of information. Stufflebeam proposes four kinds of evaluation: Context, Input, Process, and Product Evaluation (CIPP).

Stufflebeam describes CIPP evaluation as follows:

Context evaluation is the most basic type. Its purpose is to provide a rationale for determination of objectives (p. 218).

. . . the purpose of input evaluation is to provide information for determining how to utilize resources to meet program goals (p. 222).

. . . once a designed course of action has been approved and implementation has begun, process evaluation is necessary to

provide periodic feedback to persons responsible for implementing plans and procedures (p. 229)

. . . the fourth type of evaluation is product evaluation. Its purpose is to measure and interpret attainments not only at the end of a project cycle, but as often as necessary during the project term (p. 232).

(For reference see Controlling Guide 6)

Section Six. Needed Knowledge, Understanding, Attitudes, and Skills

According to many people writing in the area of management, many notions about management have been discredited or discarded.

For example:

Managers or leaders are born.

There is a standard managerial type of person based on a distinguishing set of traits.

There is an ideal or standard set of management performance patterns and practices.

There is one standard effective leadership style.

Also there seem to be at least two ideas regarding management that have emerged which are generally accepted by managers and emphasized in related literature on management. These two ideas are:

The managing process can be analyzed, its components identified and described, and the requisite knowledge, understanding, attitudes, and skills for successful performance identified and learned.

The knowledge, understanding, attitudes, and skills are common to all managerial positions regardless of function or level and are transferable from one job to another.

Recent literature and research in the field of leadership and management have focused on leadership effectiveness as determined by situational factors (Fiedler, 1967; Bennis, 1969; Reddin, 1970; Trusty, 1971). The notion is that leadership behavior should be determined and subsequent effectiveness affected by situational task requirements and employee behavior. The purpose of emphasizing the foregoing information is to identify and describe the knowledge, understanding, attitudes, and skills needed by a project manager.

Needed Knowledge

Knowledge, as defined in the Glossary, is familiarity or acquaintance with facts and other information gained by actual experiences so that a clear perception of the truth is learned. Knowledge can be gained by a person through reading, talking with others, thinking, and personal experiences.

There are many pieces of information related to effectiveness available to project managers. Several areas of facts and information are:

The technical field the project is addressing

How to complete a project proposal

The components or steps in planning, programming, implementing and controlling a project and how to put them into practice

Management's role and responsibilities in planning, programming, implementing, and controlling a project

Attitudes needed to be an effective project manager

Skills needed to be an effective project manager

Management principles and practices

Needed Understanding

Understanding is defined in the Glossary as the intellectual capability of comprehending facts and other information to form reasoned and accurate interpretations and judgments.

Based on their knowledge, project managers make specific interpretations and judgments which determine how effectively they function. Of fundamental importance is leadership behavior. Schmidt (1961) identified five typical patterns of leadership behavior that influence and stimulate people. The five patterns have significance for project managers. As defined by Schmidt, the five patterns are:

"Telling" . . . The leader identifies a problem, considers alternative solutions, chooses one of them, and then tells his followers what they are to do. He may or may not consider what he believes the group members will think or feel about the decision, but they clearly do not participate directly in the decision-making. Coercion may or may not be used or implied.

"Selling" . . . The leader, as before, makes the decision without consulting his group. However, instead of simply announcing his decision, he tries to persuade the group members to accept it. He points out how he has considered organization goals and the interests of group members and he states how the members will benefit from carrying out the decision.

"Testing" . . . The leader identifies a problem and proposes a tentative solution. Before finalizing it, however, he gets the reaction of those who will implement it. He says, in

effect, "I'd like your frank reactions to this proposal, and I will then make the final decision."

"Consulting" . . . The leader here gives the group members a chance to influence the decisions from the beginning. He presents a problem and relevant background information, then asks the members for their ideas on how to solve it. In effect, the group is invited to increase the number of alternative actions to be considered. The leader then selects the solution he regards as most promising.

"Joining" . . . The leader here participates in the discussion as "just another member" and agrees in advance to carry out whatever decision the group makes. The only limits placed on the group are those given to the leader by his superiors. (Many research and development teams make decisions this way) (p. 4)

It is recommended that project managers become familiar with these five patterns when exercising their influence on the human resources they manage. Project managers must also be leaders. Being a leader requires many things, not the least of which is the practice of successful leadership skills.

Schmidt (1961) also identified three kinds of forces of particular importance to a leader in deciding which type of leadership behavior to use. The three kinds were forces residing in the leader, the group members, and the situation.

Schmidt also provided the following check list of questions that a leader might ask himself. The questions included (Schmidt, 1961):

1. In reviewing my recent leadership behavior, what pattern of leadership ("Tell-Sell-Test-Consult-Join") have I chosen most frequently?
2. Is my leadership usually influenced more by forces in myself, forces in the group, or forces in the situation? Have I tended to neglect any of these forces?

3. Do I usually let the members of my group know how I intend to use my authority as the leader--and how much influence they will have in making a particular decision?
4. How much attention do I give to the long-run objectives (increased motivation, individual development, teamwork, etc.) when choosing a leadership pattern?
5. How well do I know the expectations of those I lead? Do I make it possible for them to tell me what they like and don't like about my leadership?
6. When I am a member of a group, rather than the leader, what leadership behavior makes me strive to do my best?
7. Comparing my leadership behavior now to what it was a year or two ago, can I detect any trend along the "T-S-T-C-J" continuum? If I am more "leader-centered" or "group-centered" than previously, what may be the major causes for this change? (p. 11)

It is vital for project managers to understand what type of leadership behavior to put into practice, as it is vital that project managers understand how to put into practice the steps and components of the elements of planning, programming, implementing, and controlling.

Needed Attitudes

Attitudes are defined in the Glossary as the qualities or state indicating action, feeling, or mood. It is extremely important that project managers possess appropriate managerial attitudes. Experts in management emphasize that poor management attitudes are one of the most common reasons for manager ineffectiveness. Some of the more common poor attitudes include: being pessimistic, lacking self-confidence, narrow-mindedness, personal prejudices, jealousy, and

fear. Also, it should be remembered that attitudes affect other people. Project managers have a particular impact and influence on the attitudes and morale of their staff and associates.

The attitudes that are suggested to be stressed by project managers include:

An optimistic attitude that exemplifies: the job can be done, obstacles can be overcome, desired results can be achieved, and one which generates confidence, enthusiasm, and the will to win in one's self and in others.

An attitude of positive regard for staff as demonstrated by confidence in their competence, trust in their integrity, respect for their dignity and individuality, concern for their problems, interest in their progress, and pride in their accomplishments.

An attitude of empathy as demonstrated by working with and through people and by helping them to help themselves to accomplish the desired results.

An attitude that demonstrates pride and confidence in the project and agency or school operating the project.

Needed Skills

Skill is defined in the Glossary as the quality one possesses or is able to perform appropriately to facilitate personal and/or group growth toward a desired outcome. Successful project managers are expected to have a complete knowledge and understanding about needed management practices, attitudes, and techniques. However, more importantly, project managers need to translate their knowledge and understanding into action. Certainly the achievement of results by project managers is dependent upon the practice of specific managerial

skills.

Results of a questionnaire on managerial skills received from 36 project managers in Michigan indicated the following skills were considered to be most important for the effective project manager: possesses high energy; speaks fluently and clearly; makes needed decisions; feels self-confidence in self; feels enthusiastic toward job; possesses the will to win (drive); demonstrates flexibility and accepts change; and organizes staff, money, and other resources to accomplish project goals.

The major premise of this monograph is that project managers must work with and through people to accomplish project goals. The avenue for project managers and staff to accomplish project goals is through planning, programming, implementing, and controlling. During each phase, skills are needed, many of which are based on the roles of the project manager and individual staff members.

Keeping in mind that numerous skills are necessary to achieve the desired results, the primary project manager skills are listed as the ability to organize people and other resources, make needed decisions, communicate, delegate, influence and motivate people, perceive the whole and lead people.

The reader is referred to the previous sections and Section Seven for more information on these skills. Many of the skills have been alluded to earlier. These skills are considered in turn.

Organize people and other resources. --Every project manager is entrusted with human and non-human resources. It is essential that a project manager organize the resources so that the project goals can be attained. Important in organizing are: establishing priorities, resolving conflict, utilizing time efficiently, utilizing staff effectively, and managing details.

Make needed decisions. --Every day a project manager is required to make decisions. The ability to make decisions consistent with project purpose is a key skill for a project manager.

Communicate. --A project manager must be able to communicate effectively both verbally and non-verbally. The way to mutual understanding between people is through communication. A project manager should concentrate on improving his communication skills, which include: speaking, writing, listening, observing, and reading.

Delegate. --A project manager cannot be all things to all people. Work must be divided up and entrusted to staff. Staff must be provided with the flexibility and responsibility to carry out their job without constant involvement by the project manager in the details of their job. The only job a project manager should not delegate is the job or responsibility for making final decisions. Delegating and entrusting work to others are keys to obtaining expected results through others.

Influence and motivate people. --An effective project manager is one that is able to get people to do what he wants them to because

they want to. Influencing and motivating people within the framework of the project is a key skill for a project manager.

Perceive the whole. --An effective project manager never loses sight of the desired end results. The manager should be conscious of how all the parts of his project should fit together to reach the desired results. Decisions and programs should be implemented with the "whole" project in mind.

Lead people. --An effective manager is one that is able to effectively tell, sell, test, consult, or join appropriately as a project is planned, programmed, implemented, and controlled. The effective project manager is one that has a large repertoire of leadership and managerial skills and techniques and is able to apply them effectively in different situations. The work of Fiedler (1967) and Reddin (1970) provide a thorough treatise on situational leadership and managerial skills. The reader is also referred to the work of Carkhuff (1971) for discussion of leadership skills and human resource development.

In summary, an effective project manager will demonstrate the knowledge, understanding, attitudes, and skills needed to effectively plan, program, implement, and control his project. Effectiveness does not come easy and only comes through practice that leads to continued growth from one level of effectiveness to another. The way is there if it is understood and if the will to be effective is put into practice.

Section Seven. Resources, Glossary and Guides

This section contains publications that provide sources for further information, a glossary, and guides which may be used during planning, programming, implementing and controlling.

A list of nineteen key terms follow. For each term, one or more references are cited. The resource list of references includes appropriate term numbers for each resource. For example, R. F. Alioto's and J. A. Jungherr's book on planning programming budgeting system corresponds to terms one, thirteen and fifteen. The procedure used was to list the primary term(s) covered by each publication.

Each term is further described as to whether it relates to the human dimension or project program development or organization dimension.

<u>Term</u>	<u>Human</u>	<u>Dimension</u>
		<u>Project Program Develop- ment or Organization</u>
1. Budgeting	—	<u>X</u>
2. Communication	<u>X</u>	—
3. Emotional-Interpersonal Skill Development	<u>X</u>	—
4. Establishing Calendars or Timetables	—	<u>X</u>
5. Goals and Performance Objectives	—	<u>X</u>
6. How to Develop a Proposal	—	<u>X</u>

<u>Term</u>	<u>Dimension</u> <u>Project Program Develop-</u> <u>ment or Organization</u>	
	<u>Human</u>	
7. Human Relations and Group Procedures	<u>X</u>	<u> </u>
8. Intellectual Skill Development	<u>X</u>	<u> </u>
9. Leadership and Leadership Skills	<u>X</u>	<u> </u>
10. Management and Management Skills	<u>X</u>	<u> </u>
11. Needs Assessment	<u> </u>	<u>X</u>
12. Physical Skill Development	<u>X</u>	<u> </u>
13. Planning	<u> </u>	<u>X</u>
14. Problem Solving and Decision Making	<u> </u>	<u>X</u>
15. Program Development and Delivery Systems	<u> </u>	<u>X</u>
16. Project Evaluation	<u> </u>	<u>X</u>
17. Project Management	<u> </u>	<u>X</u>
18. Selecting and Training Staff	<u>X</u>	<u> </u>
19. Staff Performance Appraisal	<u>X</u>	<u> </u>

Resources from which terms were gathered:

<u>Term</u> <u>Number</u>	<u>Resource</u>
1, 13, 15	Alioto, R. F. and Jungherr, J. A. <u>Operational ppbs for education</u> . New York: Harper and Row, 1971.
3, 5	Argyris, C. and Harrison, R. <u>Interpersonal competence and organizational effectiveness</u> . Homewood, Ill.: Richard D. Irwin, 1962.

<u>Term Number</u>	<u>Resource</u>
4, 7	Argyris, C. <u>Integrating the individual and the organization.</u> New York: John Wiley & Sons, 1964.
4, 7	Aspy, D. <u>Toward a technology for humanizing education.</u> Champaign, Ill.: Research Press, 1972.
9, 10	Barnard, C.I. <u>The functions of the executive.</u> Cambridge, Mass.: Harvard University Press, 1968.
5	Barrett, J.H. <u>Individual goals and organizational objectives.</u> Ann Arbor, Mich.: Braun-Brumfield, 1970.
16	Beatty, W.H. <u>Improving educational assessment and an inventory of measures of affective behavior.</u> Washington, D.C.: Association for Supervision and Curriculum Development, 1969.
10	Bennis, W.G. <u>Organization development: its nature, origins, and prospects.</u> Reading, Mass.: Addison-Wesley Publishing, 1969.
7, 14	Blake, R.R., & Mouton, J.S. <u>Group dynamics--key to decision making.</u> Austin: Gulf Publishing, 1961.
10	Blake, R.R., & Mouton, J.S. <u>The managerial grid.</u> Houston: Gulf Publishing, 1964.
17	Bocchino, W.A. <u>Management information systems.</u> Englewood Cliffs, N.J.: Prentice-Hall, 1972.
14	Brown, D.S. <u>Decision making.</u> Washington, D.C.: Leadership Resources, 1961.
10, 18	Brown, D.S. <u>Delegating and sharing work.</u> Washington, D.C. Leadership Resources, 1966.
13	Bushnell, D.S., & Rappaport, D. (Ed.) <u>Planned change in education.</u> New York: Harcourt Brace Jovanovich, 1971.
9, 10	Campbell, R.F., Corbally, J.E., & Ramseyer, J.A. <u>Introduction to educational administration.</u> (3rd ed.) Boston: Allyn and Bacon, 1966.

<u>Term Number</u>	<u>Resource</u>
3, 7	Carkhuff, R. R. <u>Helping and human relations</u> , Vol. 1. New York: Holt, Rinehart and Winston, 1969.
3, 7	Carkhuff, R. R. <u>Helping and human relations</u> , Vol. 2. New York: Holt, Rinehart and Winston, 1969.
3, 7	Carkhuff, R. R. <u>The art of helping</u> . Amherst, Mass.: Human Resource Development Press, 1972.
14	Carkhuff, R. R. <u>The art of problem solving</u> . Amherst, Mass.: Human Resource Development Press, 1973.
3, 7	Carkhuff, R. R. <u>The development of human resources</u> . New York: Holt, Rinehart and Winston, 1971.
2, 7	Cartwright, D., & Zander, A. <u>Group dynamics</u> . Evanston, Ill.: Row, Peterson & Company, 1960.
8	Chisholm, R. M. <u>Theory of knowledge</u> . Englewood Cliffs, N. J.: Prentice-Hall, 1966.
15	Chitwood, S. R. <u>Improving performance through job design</u> . Washington, D. C.: Leadership Resources, 1972.
17	Cleland, D. I., & King, W. R. <u>Systems analysis and project management</u> . New York: McGraw-Hill, 1968.
5	<u>Common goals of Michigan education</u> . Lansing, Mich.: Michigan State Department of Education, 1971.
14	<u>Community decision-making</u> . Washington, D. C.: National Education Association, 1969.
17	Cook, D. L. <u>Educational project management</u> . Columbus, Ohio: Charles E. Merrill, 1971.
9, 10	Cribbin, J. J. <u>Effective managerial leadership</u> . New York: American Management Association, 1972.
6, 17	<u>Croft federal aid service reference manual</u> . New London, Conn.: Croft Educational Services, 1973.

<u>Term Number</u>	<u>Resource</u>
9, 10	Dahl, H. L. <u>Branch office supervisory conferences.</u> Kalamazoo, Mich.: The Upjohn Company, 1963.
2	<u>Dissemination.</u> Lansing, Mich.: Michigan State Department of Education, 1972.
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Glossary

<u>ability</u>	the quality of being able to perform a particular skill or competency
<u>activity</u>	the interaction of human and non-human resources to accomplish a task
<u>adminis- tration</u>	a social process structured in a hierarchy of superordinate and subordinate relationships and functionally practiced through allocation and integration of resources to achieve the project goals
<u>alternative course of action</u>	a means to achieve a goal (what can be done)
<u>attitudes</u>	qualities or state indicating action, feeling, or mood
<u>behavior</u>	the way a person acts to meet a certain standard
<u>belief</u>	a conviction or persuasion of truth
<u>budget</u>	an organized and structured plan listing the cost of human and non-human resources
<u>calendar of activities events</u>	a concise graphic illustration of the activities and events necessary to activate programs to accomplish project goals
<u>clients</u>	the individuals for whom the project is designed
<u>communi- cation</u>	a process whereby two or more individuals exchange thoughts verbally or in writing. The term implies there is a sender and a receiver. There is no communication unless the message of the sender is received by the receiver.

<u>communication system</u>	a plan developed for the purpose of communicating
<u>concept</u>	a mental image of something formed by generalizations from particular thoughts or opinions
<u>controlling</u>	a process of establishing standards of performance and regular follow-up methods to determine if the implemented programs are proceeding as planned and programmed
<u>decision making</u>	a process of specifying a goal, identifying alternatives to solve a problem, and selecting the best alternative(s)
<u>delivery system</u>	the implementation of all human and non-human resources through established programs to accomplish project goals
<u>effectiveness</u>	a function of the individual's or group of individuals' ability to attain goals in a particular or general area
<u>evaluation</u>	the process of providing information for decisions and determining whether the programs implemented through various activities and events are on target, and eventually determining the quality and quantity of results
<u>expectation</u>	a belief or value judgment held by an individual for himself or for another individual in regard to what is looked for in terms of benefits to be performed in a particular role
<u>feedback</u>	a process of communicating to the origin of information some judgment about the information
<u>goal</u>	a general statement of a desired outcome
<u>group</u>	a collection of people in face-to-face contact interacting for a common reason
<u>human relations</u>	the interaction and social discourse between two or more individuals and the results of that discourse in the values, beliefs, and ideas that help to accomplish individual and project goals
<u>idea</u>	a concept with a preliminary plan and often a plan of purpose of action

<u>implementation steps</u>	a list of tasks, activities, and events for the purpose of accomplishing a goal
<u>implementing</u>	a process of allocating and activating resources to carry out the programs developed to achieve the project goals
<u>input</u>	the resources used in achieving the project goals
<u>in-service education</u>	learning experiences established to increase staff growth and development
<u>instructional staff</u>	the staff members that have direct contact with the clients through daily physical presentation of the programs
<u>job description</u>	the definition and description of a particular job through use of a specified format
<u>knowledge</u>	familiarity or acquaintance with facts and other information gained by actual experiences so that a clear perception of the truth is learned
<u>leader</u>	one who motivates other people to mutually agree to certain goals and subsequently get the people to implement programs to meet those goals
<u>leadership</u>	a process of leading and contains the leader and followers
<u>learning</u>	a process to gain knowledge, understanding of, or skills by study, instruction, or investigation
<u>management</u>	the process of planning, programming, implementing, and controlling to accomplish goals
<u>management by objectives</u>	a way of getting improved results and managerial action. It can be described as a method whereby the managers and staff in an organization identify major areas of responsibility, establish standards or criteria for acceptable performance, and determine the methods of measuring the results
<u>management system</u>	the elements of planning, programming, implementing, and controlling functioning interdependently through people to accomplish goals

<u>manage- ment system model</u>	a simplified visual representation of a management system
<u>manager</u>	the person whose responsibility it is to work within the project goals to determine, prioritize, secure, allocate, and activate resources while keeping constant vigilance over the resources to determine if they are being allocated effectively to meet the project goals.
<u>model</u>	a simplified and functional visual representation of an idea which serves as a guide to a real-world situation
<u>motivation</u>	the understanding and agreement to goals by people to bring about action
<u>need</u>	the lack of anything desired or useful
<u>need dis- positions</u>	patterned or interrelated goal-oriented forces within the individual that vary in specificity and ultimately are determinants of cognitive and perceptual, as well as other, forms of behavior
<u>needs assess- ment</u>	a process of determining different performance levels of clients and to identify and analyze the needs and rationale for implementing a project
<u>organiza- tion</u>	a pattern of relationships of interrelated elements or parts which vertically and horizontally integrate resources for the achievement of the project purpose and goals
<u>organiza- tional structure</u>	overall formal vertical and horizontal organization of the human resources
<u>perception</u>	the interpretation given to reality by an individual
<u>perform- ance objective</u>	a communication device for expressing in specific performance terms what is to be accomplished, under what conditions, at what level of competency, and measured by what techniques and instruments

<u>personality</u>	the sum total of a person's habitual behavior; a social stimulus which can successfully influence other people and a motivational force within an individual that determines his unique adjustments to his environment
<u>planning</u>	a process of preparing for future tasks, activities, and events
<u>policy</u>	what an organization is to do from which procedures on how to implement flow, and overall guide to action
<u>position</u>	a job status in a project defined by the task or tasks allocated to the holder by the project manager
<u>power</u>	that behavior in the form of reward and punishment that is practiced by one individual in relationship to another
<u>principle</u>	a statement of order or relationship generally accepted by individuals as a guideline for action
<u>problem</u>	a deviation from the status quo or standard and an imbalance between what should be and what actually is happening
<u>problem analysis</u>	a process of narrowing and reducing the cause of a problem to identifiable and understandable parts
<u>problem solving</u>	the process of problem analysis and decision making that results in resolution of a problem
<u>procedure</u>	the established manner of performing a task; in essence, an activity or method
<u>process</u>	a series of actions or operations leading to certain end results
<u>program</u>	tasks, activities, and events systematically organized and implemented to achieve specific goals
<u>program- ming</u>	a process of developing and organizing systematic procedures to achieve the project goals
<u>project</u>	an endeavor organized and implemented by people to meet an expressed need, idea, or problem and is usually operated for a limited duration

<u>project management</u>	a process of management concerned with initiating, maintaining, and evaluating a project
<u>project manager</u>	the individual who manages a project through allocating and activating resources to accomplish the project goals
<u>recycling</u>	the controlling process of periodically assessing whether you are on target to accomplish the goals
<u>resources</u>	people and things to assist in developing and implementing programs to accomplish the project goals and includes: people, materials, facilities, equipment, and money
<u>risk</u>	a situation which poses some possible threat for an individual, group, or an organization
<u>role</u>	the sum total of the expectations held by project members about specific functions for an individual project member
<u>skills</u>	qualities one possesses or is able to perform appropriately to facilitate personal and/or group growth toward a desired outcome
<u>support system</u>	school staff and other people who are indirectly involved in a project's day-to-day operations but play an important role in helping a project accomplish its goals
<u>supportive staff</u>	those people who provide services to clients, instructional staff, and others in the delivery of programs to meet the ultimate goals
<u>system</u>	a coherent body of interdependent parts organized into a functional operation with inputs, processes, and outputs
<u>system-atic</u>	carrying out a program thoroughly and sequentially, based on a system of coherent ideas, concepts, facts, and principles.
<u>task</u>	an assignment of work to be accomplished
<u>under-standing</u>	the intellectual capability of comprehending facts and other information to form reasoned and accurate judgments

PLANNING GUIDE 1. --Planning steps check list

Planning Steps	Completion Date	Comments
1. Implement a needs assessment	_____	
2. Define the project purpose	_____	
3. Identify the project clients to be served	_____	
4. Describe the rationale or justification for the project	_____	
5. Set and prioritize the goals & objectives	_____	
6. Select possible alternative courses of action and procedures to accomplish goals	_____	
7. Decide on the best alternative(s) to accomplish the goals	_____	
8. Recycle to check previous steps	_____	
9. List and describe contingency provisions	_____	
10. Describe environmental factors within which the project will operate	_____	
11. Develop evaluation design	_____	
12. Decide on a practical timetable	_____	
13. Recycle to check previous steps	_____	
14. Develop a budget	_____	
15. Assess steps in planning	_____	

PLANNING GUIDE 2. --Ten guidelines to observe in developing a project proposal

1. Involve staff, clients, and community representatives affected by the proposed project, and other people deemed applicable for leadership value.
2. Have a complete understanding and follow the guidelines and/or rules and regulations in regard to a special funding source.
3. Consult special funding source officials for advice and communicate with them in regard to the goals of the project in person before formally submitting the project proposal.
4. Include all the necessary information in the written proposal. Do not rely on verbal communication.
5. Be specific in regard to goals and objectives.
6. Identify similar projects in existence and gain an understanding of their operation.
7. Plan for appropriate monitoring and evaluation.
8. Publicize information about the project to the public after implementation is assured.
9. Be sure to have an adequate and qualified staff to operate the program.
10. Reflect a realistic and comprehensive budget for staff, materials, and facilities.

PLANNING GUIDE 3. --Principles and procedures for creating proposals for special funded projects

This supplement provides a guideline for developing and subsequently securing funding for special funded projects. It should be used as a worksheet, to be modified as necessary.

Definition of Terms

Facilitator	the individual writing the narrative of a project proposal
Narrative	the body or main part of a project proposal
Prospectus	brief summary of proposed project
Categorical grant	special aid for a specific purpose
Competitive grant	aid distributed to a few selected applicants based on the value of the project
Allocated grant	aid divided to predetermined agencies based on a specified formula
Project manager	the leader of a given project

Principles

- I. The project is developed because of an idea, need, or problem.
- II. Funding sources are subsequently sought that will fund the project as it is intended (sometimes the monies are allocated before the need is ascertained).
- III. Most special grants are categorical aid and are intended to be temporary or supplemental. Therefore, the following should be considered:
 - A. Are local and/or state funds available to carry on the project after the initial project period has expired?

Preliminary long-range planning on continuation of the project after the termination of the initial funding is a necessity.

- B. Evaluation during and after the termination of the project will determine whether project goals have been accomplished.
 - C. To institute a blanket policy of funding only short-term demonstration or research projects through special grants may discourage creative ideas. Therefore, some projects worth continuing may require seeking local and state funds.
- IV. Inclusion of parents, students and others is desirable in the planning and the development of projects.

Procedures

I. Proposal Development

- A. An initial project prospectus should be presented and approved by top administration.
- B. After approval by the administration, steps should be taken to secure funding. The steps include: identification of funding sources, establishment of timetable submission, identification of human and physical resources to facilitate project development, and contacting possible funding sources.
- C. One or more primary funding sources should be selected and a proposal developed and submitted.
- D. The narrative or body of the project proposal should be written by or in cooperation with an individual who has expertise in the particular area under development.
- E. The completed proposal should be submitted to the top administration for final review prior to submission.
- F. After final review and approval, the proposal should be presented to the board for approval.
- G. The proposal is then delivered or sent to the appropriate state, federal department, or other funding agency for consideration.

II. Funding Administration

- A. The accounting records and procedures should be determined by the business office in consultation with the project manager and top administration.
- B. Financial reports should be completed by the business office.

PLANNING GUIDE 4. --Allocation of responsibilities for special projects

Facilitator or Project Manager	Top Administration	Business Office
1. Idea for project conceived		
2. Review of idea with top administration	2. Review of idea with facilitator	
4. Facilitator writes prospectus; presents to top administration		
5. Discussion of funding sources with top administration	5. Discussion of funding sources with facilitator & selection of sources	
6. Prepares proposal		
7. Presents proposal to top administration for approval	7. Review narrative with facilitator & approve	
	8. Submit proposal to board for approval	
9. Send proposal to appropriate funding source for approval		
10. Confer with business office to set up accounting records	10. Confer with business office to set up accounting records	10. Confers with facilitator and top administration to set up accounting records
11. Assists in submitting request for funds	11. Assists in submitting request for funds	11. Submits request for funds

PLANNING GUIDE 4 (con't.)

Facilitator or Project Manager	Top Administration	Business Office
12. Confers with business office on preliminary & annual finance report		12. Submits preliminary & annual final finance reports
13. Preparation of evaluation report	13. Assists in evaluation report	
14. Confer with top administration regarding re-application	14. Confer with project manager regarding re-application	

PLANNING GUIDE 5. --Contents of document for presenting proposal to board

Content

1. List title of project.
2. Define purpose of project.
3. How does definition fit into overall agency or school system goals?
4. List and briefly describe short- and long-range goals of project.
5. Briefly give documentation of how the goals will be carried out (procedures and evaluation).
6. Outline of budget request:
 - Resources needed and cost
 - Manpower allocation
7. Top administrative recommendations.
8. Other:
 - Timetable
 - When to top administration _____
 - When to board _____
 - When to funding source _____

PLANNING GUIDE 6. --Guidelines for funding source visitation

This guideline can be used when a funding source has not been secured. There are five steps to follow in securing funding:

1. Obtain first-hand knowledge of funding source priorities, programs, and acquaintance with personnel.
2. Decide whether or not to submit a prospectus and, subsequently, a proposal.
3. Submit prospectus.
4. Submit proposal.
5. Negotiate contractual/grant terms.

After determining the funding sources that best fit your project, either set up a visit or mail a prospectus to them. When arranging for a visit, the following steps can be used:

1. Determine name of funding source program director.
2. Make an appointment.
3. Send prospectus several days in advance with cover letter confirming appointment.
4. Do your homework thoroughly prior to meeting (know your program and related programs, if any; know name and work of leading persons in field; know the agency's programs).
5. Set 45 minutes as maximum time for presentation unless program director indicates desire to talk longer.
6. Listen carefully for what is said and what is not said.
7. Concentrate on having the funding source contact person understand the points of your prospectus with emphasis on the importance and method.
8. Make sure your discussion is open and covers all necessary information.

PLANNING GUIDE 6 (con't.)

9. Before leaving, determine "where do we go from here?"
10. After return from trip, write letter of thank you, reviewing major points covered during the meeting and agreement on follow-up.
11. Follow up.

If the prospectus is mailed, the following steps should be followed:

1. Determine name of particular program director.
2. Mail prospectus with cover letter suggesting a meeting if convenient.
3. Allow sufficient response time. If it passes, submit an inquiry of status. According to response, follow through.

PLANNING GUIDE 7. --Goal setting worksheet

Instructions: This form should be used to define the project purpose, identify project clients, project rationale, and set the project goals.

Project Purpose:

Project Clients to be Served:

Project Rationale:

List Project Goals:

PLANNING GUIDE 8. -- Problem solving-decision making matrix worksheet

Instructions (Steps): (1) Define and list the problem; (2) Define and list the goal; (3) Develop and list the alternate course of action; (4) Develop and list value items (i.e., essential goals, objectives, activities, or events); (5) Weight the importance of the value items from one to ten (one is lowest and ten highest); (6) Sum the weights and multiply by five to calculate the ideal score; (7) Score each value item for each alternative from one to five based on how well the alternative includes or helps each value item (one is lowest and five is highest); (8) Multiply the score for each alternative listed in step #7 by the weight for each value item listed in step #5; (9) Select the best alternative or highest scored alternative.

Problem: _____

Goal: _____

Value Items	Item Weight	Alternative Course of Action					
		Score	Weighted Score	Score	Weighted Score	Score	Weighted Score
Total weight x 5 = ideal score		Total -		Total -		Total -	

Best Alternative: _____

EXAMPLE PLANNING GUIDE 8. --Problem Solving-Decision Making Matrix

Problem: No assistance provided in job placement to high school seniors not going to college.

Goal: To provide a job placement service for high school seniors.

Value Items	Alternative Courses of Action						
	Value Item Weights	Coun-selors Place Students		Hire a Place-ment Coordi-nator		Teachers Place Students	
		wt.	wt. sc.	wt.	wt. sc.	wt.	wt. sc.
Cost	8	5	(40)	1	(8)	5	(40)
Physically contacting potential employers for jobs	8	2	(16)	5	(40)	1	(8)
Provide job information to 12th grade students	10	4	(40)	4	(40)	4	(40)
Provide job orientation sessions for 12th grade students	10	5	(50)	5	(50)	3	(30)
Set up job interviews for 12th grade students	8	3	(24)	5	(40)	1	(8)
Follow-up of students on jobs	8	5	(40)	5	(40)	3	(24)
Develop a list of available jobs	9	3	(27)	5	(45)	3	(27)
Identify job interests of 12th grade students	10	5	(50)	5	(50)	4	(40)
Total Scores	71 x 5 = 355 (Ideal Score)	(277)		(323)		(217)	

Best Alternative: Hire a Placement Coordinator

PLANNING GUIDE 10. -- Weekly list of activities

Activities that Must Occur	Needed or Expected Resources & Experiences	Participants	Cost	Target Date for Completion

PLANNING GUIDE 11. --Budget worksheet

Items	Amount
Administration	
Salaries	
Contracted Services	
Office Supplies	
Other Expenses	
Instruction	
Salaries	
Instructional Materials	
Contracted Services	
Other Expenses	
Attendance and Health Services	
Student Transportation	
Salaries	
Contracted Services	
Other Expenses	
Operation of Facilities	
Salaries	
Contracted Services	
Other Expenses	
Maintenance of Facilities & Equipment	
Salaries	
Contracted Services	
Replacement of Equipment	
Other Expenses	
Fixed Charges	
Employee Retirement	
Insurance	
Other Expenses	
Food Services & Student Body Activities	
Salaries	
Contracted Services	
Other Expenses	
Community Services	
Capital Outlay	
Sites	
Buildings	
Equipment	
Other Expenses	
Total	

PROGRAMMING GUIDE 1. --Programming check list

Steps	Date Completed	Comments
1. Understand goals	_____	
2. Develop a list of tasks to be accomplished	_____	
3. Develop job descriptions	_____	
4. Decide on and develop an organizational chart	_____	
5. Recycle to check previous steps	_____	
6. Secure candidates for available positions	_____	
7. Decide on questions to ask candidates	_____	
8. Schedule and conduct interviews	_____	
9. Select best candidates for the available positions	_____	
10. Develop and implement an orientation & training program for staff	_____	
11. Develop the delivery system	_____	
12. Recycle to check previous steps	_____	
13. Develop a communication and dissemination system	_____	
14. Develop plans for effective human relations	_____	
15. Develop methods for problem solving	_____	
16. Finalize timetable	_____	

PROGRAMMING GUIDE 1 (con't.)

Steps	Date Completed	Comments
17. Finalize budget	_____	
18. Assess programming steps	_____	

PROGRAMMING GUIDE 2. --Task list worksheet

Columns:

#1 Task No.	#2 Job Assign- ment	#3 List and Describe Tasks	#4 Time Required Per Week (Hours)

- Steps: 1. List and describe tasks in column #3.
2. Number tasks in column #1 based on a system that provides for subsequent classification of the tasks into a specific job.
3. Estimate the hours per week required to do the task in column #4.
4. Assign job titles to the tasks in column #2.

EXAMPLE PROGRAMMING GUIDE 2, --Task list worksheet

Task No.	Job Assignment	List and Describe Tasks	Time Required per Week (Hours)
1	Secretary	Answer telephone	10
1	Secretary	Type letters, memos, and other things	
1	Secretary	File	5.5
1	Secretary	Make travel arrangements	occasional
2	Counselor	Counsel students individually	15
2	Counselor	Counsel students in small groups about careers	5
3	Project Manager	Provide in-service training for staff	5
3	Project Manager	Hire staff	initial taking considerable time
3	Project Manager	Train staff	Ongoing 5.8
4	Teacher	Teach students about careers	5
4	Teacher	Teach students how to read	5

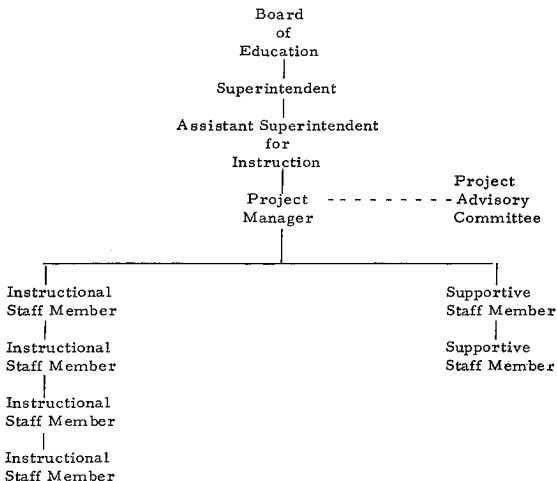
PROGRAMMING GUIDE 3. --Job description worksheet

Job Title: _____

Salary Range: _____

1. General statement of responsibilities and relationship of position to other positions:
2. List major responsibilities:
3. Examples of work: (illustrative only)
4. Required knowledge, understanding, attitudes, and skills:
(Please list with an alphabetical designation)
5. Acceptable experience and training:
6. Terms of employment and performance appraisal criteria:
7. Performance appraisal review procedure:

PROGRAMMING GUIDE 4. --Example organizational chart



The names of people and their titles should be used in the organizational chart.

Notes:

The organization flows in direct line from the board through the instructional and supportive staff members. The dotted line from the Project Manager to the Project Advisory Committee displays that the Advisory Committee is not in a direct line of command and functions in an advisory capacity with the project.

Lastly, the lines from the project manager to the instructional and supportive staff members are directly responsible to the project manager.

PROGRAMMING GUIDE 5.--Interview questions worksheet

1. Questions to analyze the candidate's verbal communication skills:
 - a.
 - b.
 - c.
 - d.
2. Questions to analyze the candidate's knowledge that directly relates to the available position:
 - a.
 - b.
 - c.
 - d.
3. Questions to analyze the candidate's understanding of how to function in the available position:
 - a.
 - b.
 - c.
 - d.
4. Questions to analyze the candidate's overall attitude toward the project, school system, administration, and clients to be served:
 - a.
 - b.
 - c.
 - d.
5. Questions to analyze the candidate's background, experience, and significant accomplishments that demonstrate satisfactory or outstanding skills and effectiveness:
 - a.
 - b.
 - c.
 - d.

Note:

Each candidate should be rated on each question. The Problem Solving-Decision Making Matrix, Planning Guide 8, could be used to decide on the best candidate. The questions should be listed as the value items and weighted. The candidates can be the alternatives and their responses scored and compared.

PROGRAMMING GUIDE 6. --Worksheet for developing staff orientation and training

Name of Employee: _____

Orientation

List the things that should be accomplished with the new employee to orient him or her to the project, school system, and job:

What should occur:	How it should occur:	When it should occur:
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____
7. _____	_____	_____
8. _____	_____	_____

Training

List the things that should be accomplished with the new employee to train him or her for the job:

What should occur:	How it should occur:	When it should occur:
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____

PROGRAMMING GUIDE 7. --Worksheet for developing staff objectives

Responsi- bilities	Objectives for each responsi- bility (an- ticipated end result	Implemen- tation steps; experiences needed for each objec- tive	Standard of Perform- ance (stated in quality and/ or quantity terms)	Evalu- ation Methods
I will,	In order that,	By,	So that,	As determined,

EXAMPLE PROGRAMMING GUIDE 7. -- Worksheet for developing staff objectives

Responsibilities	Objectives for each responsibility (anticipated end result)	Implementation steps; experiences needed for each objective	Standard of Performance (stated in quality and/or quantity terms)	Evaluation Methods
I will, expand communication and promotional program on career education to all public	In order that, more people in the general public become informed about the career education concept	By articles in the newspaper, newsletters, speaking engagements	So that, at least ten articles appear in the local newspaper; at least four one-page newsletters are circulated; at least ten speaking engagements are scheduled with clubs and organizations	As determined, by a log of activities by a log of activities by a log of activities

PROGRAMMING GUIDE 8. --Project programming guide

Instructions:

This form can be used for each project goal or objective. The goal or objective should be specified, followed by: the priority ranking, controlling method, alternative courses of action, necessary resources, end results, and recommendations for improvement. This guide should be used during the planning phase and each subsequent phase of the project.

GOAL: _____ Priority Ranking: _____

OBJECTIVE: _____ Priority Ranking: _____

EVALUATION:

<u>List Methods</u>	<u>Beginning Date</u>	<u>Target Completion Date</u>	<u>Actual Completion Date</u>
---------------------	-----------------------	-------------------------------	-------------------------------

SELECTED ALTERNATIVE COURSES OF ACTION:

<u>List Activities</u>	<u>Beginning Date</u>	<u>Target Completion Date</u>	<u>Actual Completion Date</u>
------------------------	-----------------------	-------------------------------	-------------------------------

NECESSARY RESOURCES FOR EACH COURSE OF ACTION:

<u>List Resources</u>	<u>Beginning Date</u>	<u>Target Completion Date</u>	<u>Actual Completion Date</u>
-----------------------	-----------------------	-------------------------------	-------------------------------

END RESULTS: (Answer: to what degree of effectiveness was the goal or objective accomplished?)

RECOMMENDATIONS FOR IMPROVEMENT:

PROGRAMMING GUIDE 11. --Dissemination worksheet

List	List	List	List	List
People or Publics to Receive Information	Information to be Dissemin- ated	Means to Use in Dissemin- ation	Who will Develop the Means of Dissem- ination	How the Informa- tion Will be Trans- mitted

IMPLEMENTING GUIDE 1. --Implementing steps check list

<u>Steps or Components</u>	<u>When Completed</u>	<u>Check</u>	<u>Comments</u>
1. Utilize available resources to implement programs		_____	
2. Implement effective human relations		_____	
3. Provide in-service education for staff		_____	
4. Communicate and disseminate information to publics		_____	
5. Implement effective problem solving and decision making		_____	
6. Control and assess expenditures		_____	
7. Evaluate staff performance		_____	
8. Modify delivery system and goals		_____	
9. Final evaluation of end results		_____	

IMPLEMENTING GUIDE 2. --Check list of useful guidelines for effective groups

1. The group has written statements of its purposes and goals that are understood by each member.
2. The members are flexible and can work out conflicts.
3. The members demonstrate a high degree of communication and understanding in regard to communicating feelings, attitudes, and ideas.
4. The members demonstrate initiative in facilitating decision making while carefully considering minority viewpoints and securing the commitment of all members to important decisions.
5. The members share an appropriate balance between group productivity and the satisfaction of individual needs.
6. The members feel free to express themselves honestly.
7. The group has a high degree of group cohesiveness and loyalty.
8. Appropriate use is made of the differing abilities of its members.
9. The group is not dominated by its leader or any of its members.
10. The members are objective about analyzing the group's accomplishments and problems and can adjust to needed modifications in its operation.
11. The members maintain a balance between emotional and rational behavior.
12. The members express empathy, positive regard, and congruence for each other.
13. The members have a responsible role to play in helping the group work on its task and maintain itself as an effective working group.
14. The group accomplishes its purpose and goals.

IMPLEMENTING GUIDE 3. --Good group participant questionnaire

Instructions:

It is the purpose of this questionnaire to specify 13 items necessary to be a good group member. The questionnaire will help a person analyze his strengths and weaknesses and determine the important components to be a good group member. All during our lives we find ourselves sharing in group activity. We belong to our family, the scouts, the softball team, the Spanish Club, etc. Sometimes we belong to groups just for short periods. Accordingly, frequently groups do not function well. Since it is we who make up the group, we must always be conscious of our contribution. Following are indicated some of the roles of a good group member. You may play several or all of these roles in your group at some time; in fact, the more roles you play, the better. If you find that you have not been participating enough, resolve now to be a better group member, and watch how your group will come alive.

1. Please answer every question
2. Answer questions based on the following criteria:
 - a. Always
 - b. Sometimes
 - c. Seldom
 - d. Never
3. Answer questions by assigning a number that corresponds to the criteria:

a. Always	4
b. Sometimes	3
c. Seldom	2
d. Never	1

IMPLEMENTING GUIDE 3 (con't.)

	Some-			
	Always	times	Seldom	Never
1. Do I propose new ideas, activities, and procedures?				
2. Do I ask questions?				
3. Do I share my knowledge when it will prove helpful to the problem at hand?				
4. Do I speak up if I feel strongly about something?				
5. Do I try to bring together our ideas or activities?				
6. Do I understand the goals of the group and try to direct the discussion toward them?				
7. Do I help to arrange chairs, serve refreshments, and even clean up when the session is over?				
8. Do I ever question the practicality or the logic of a project, and do I evaluate afterwards?				
9. Do I encourage my fellow group members to do well?				
10. Do I prod the group to undertake worthy projects?				
11. Am I a mediator and a peacemaker?				
12. Am I willing to compromise?				
13. Do I encourage others to participate and to give everyone else a fair chance to speak?				

The results are based on the following scores:

Outstanding	46 to 52 points
Satisfactory	34 to 45 points
Fair	27 to 33 points
Unsatisfactory	0 to 26 points

IMPLEMENTING GUIDE 4. --Group leader's meeting guide

	Title of Group _____
Step 1--Introduction	Outline for Introduction
How will you:	
Define the group problem	_____
Focus group member attention	_____
Arouse group member interest	_____
Supply pertinent information	_____
Clarify objectives	_____
Step 2--Presenting Meeting Content	Outline for Presenting Meeting Content
How will you present the meeting content:	
Demonstrations: charts, examples	_____
Case problems, films, and other a-v materials	_____
Lead-in statements	_____
Discussion questions	_____
Summaries	_____
Step 3--Getting Acceptance or Agreement	Outline for Getting Acceptance or Agreement
How will you get acceptance or agreement:	
Lead-in statements	_____
Discussion questions	_____
Auxiliary questions	_____
Summaries	_____
Charts	_____
Step 4--Summary	Outline for Summary
How will you review:	
Objectives	_____
Content presented and discussed	_____
Conclusions reached	_____
Agreement for action	_____

IMPLEMENTING GUIDE 5. --Team development scale

This semantic differential scale can be used with the members of your team and yourself to identify the degree to which your team is functioning as a team. The results can indicate the strengths, weaknesses, and general assessment of your team's degree of effectiveness.

Each numbered item (1-11) should be answered on the basis of circling the number on the scale that best identifies the degree of effectiveness.

1. Degree of mutual trust:
 high suspicion high trust
 1 2 3 4 5
2. Degree of communications:
 guarded, cautious open, authentic
 1 2 3 4 5
3. Degree of mutual support:
 concern for others for self
 1 2 3 4 5
4. Degree of team goals:
 clearly understood not understood
 1 2 3 4 5
5. Degree of dealing with conflict within group:
 denial, avoidance, suppression acceptance & confronting
 and compromise conflicts to work them out
 1 2 3 4 5
6. Degree of utilization of human resource skills:
 skills used by team skills not used
 1 2 3 4 5
7. Degree of controls:
 control imposed on team control from within
 1 2 3 4 5
8. Degree of organization:
 restrictive, pressure for free, supportive, res-
 conformity spect for differences
 1 2 3 4 5
9. Degree of congruence:
 harmony disagreement
 1 2 3 4 5

IMPLEMENTING GUIDE 5 (con't.)

10. Degree of positive regard:
 hostility, arguing, not respect and care for
 caring others and sharing
 1 2 3 4 5
11. Degree of empathy:
 self-interested, silence listening, understanding
 opinionated & responding appropriately
 1 2 3 4 5

Scores of three to five on items 1, 2, 5, 7, 8, 10, and 11 are measures of greatest effectiveness. Accordingly, scores of three to one on items 3, 4, 6, and 9 are measures of greatest effectiveness. Score values can be assessed on the basis of the following scale:

Scoring

For items 1, 2, 5, 7, 8, 10, and 11

- 32 to 35 Extremely high degree of effectiveness
 25 to 31 High degree of effectiveness
 18 to 24 Minimal degree of effectiveness
 11 to 17 Poor degree of effectiveness
 0 to 10 Extremely poor degree of effectiveness

For items 3, 4, 6, and 9

- 6 to 4 Extremely high degree of effectiveness
 10 to 7 High degree of effectiveness
 14 to 11 Minimal degree of effectiveness
 18 to 15 Poor degree of effectiveness
 20 to 19 Extremely poor degree of effectiveness

Individual scores should be assessed as well as the collective scores of the team.

IMPLEMENTING GUIDE 6. --Project manager steps for effective staff performance

Steps:

1. Allow staff extensive freedom to plan and organize their own work.
2. Allow staff to set up special meetings and other ways to work out their differences and conflicts.
3. It is acceptable to give staff information unrelated to their immediate work.
4. Always insist that staff solve their own work problems, but be available as a consulting resource to them.
5. It is not necessary to maintain tight controls on all work to be sure things don't get out of line.
6. Provide time, money, and other resources so each staff person can develop his particular strengths and capabilities to the fullest.
7. Set up systems where information on performance results goes directly to staff instead of through you.
8. Encourage staff to get involved in the "why" of doing their job.
9. Bring staff together in joint meetings to make decisions and solve mutual problems.
10. Give staff full information about their jobs, the department, and the school system.
11. Allow staff to solve their own problems unless they ask for help or the problem is out of control.
12. Allow staff to take responsibility for controlling and managing their own work.
13. Encourage staff to redesign their jobs around their own capabilities.
14. Leave staff alone and count on them to get their jobs done.

CONTROLLING GUIDE 1. --Controlling check list

Instructions:

The list includes questions that should be answered to effectively control a project.

- | | Yes | No |
|---|-----|-----|
| 1. Have criteria and standards been established for each goal? | ___ | ___ |
| 2. Are the programs sufficiently detailed so they can accomplish the goals? | ___ | ___ |
| 3. Has a timetable for implementing programs to accomplish the goals been developed in detail? | ___ | ___ |
| 4. Are the purpose and desired end results in your project written and understood by each staff person, top administrator, and board? | ___ | ___ |
| 5. Are jobs in your project designed to accomplish the project and each person's goals? | ___ | ___ |
| 6. Are the jobs in your project designed and structured to obtain the best return on the investment in people? | ___ | ___ |
| 7. Are the right people on each job? | ___ | ___ |
| 8. Does each person possess the knowledge and skill needed to accomplish the results of the present job and job it will become in the future? | ___ | ___ |
| 9. Are the dissatisfiers of your staff minimized so that staff morale does not deteriorate? | ___ | ___ |
| 10. Are motivators, incentives, or reinforcements used to encourage increased staff satisfaction and performance? | ___ | ___ |
| 11. Is each job satisfactorily performed by each staff member? | ___ | ___ |
| 12. Are there adequate provisions for recycling? | ___ | ___ |
| 13. Will the evaluation design adequately measure the end results and delivery system? | ___ | ___ |
| 14. Are there staff performance appraisal methods and instruments developed and plans to appropriately implement them? | ___ | ___ |

CONTROLLING GUIDE 1 (con't.)

	Yes	No
15. Is there an effective means for the identification of problems, determination of causes, creation of alternatives, and selection of the best alternative?	_____	_____
16. Have procedures and instruments for communicating and disseminating information and plans for appropriately implementing them been developed?	_____	_____
17. Have procedures for holding staff meetings been established?	_____	_____
18. Has a means for implementing decisions been established?	_____	_____
19. Has a means for documenting changes made in the project been established?	_____	_____
20. Are the interpersonal relationships between staff satisfactory?	_____	_____
21. What are the progress report and final report requirements from the funding source?	_____	_____
22. How formal or informal does the report system need to be?	_____	_____
23. Who shall receive what reports and when?	_____	_____
24. Do the report forms contain all the necessary information and compare planned to actual progress?	_____	_____

CONTROLLING GUIDE 2. --Recycling check list

1. Analyze what has been done and: why, how, when and to whom.
2. Decide to retain.

Don't change anything.

3. Decide to expand.

Expand or add information (more quantity or quality).

4. Decide to condense.

Subtract information (less quantity).

5. Decide to substitute.

Add another process or procedure.

6. Decide to rearrange.

Interchange components.

7. Decide to synthesize.

Combine uses, purposes, ideas, approaches, etc.

8. Decide to transfer.

Put components to other or new uses.

CONTROLLING GUIDE 3.--Worksheet for evaluating performance

1. What was supposed to be accomplished?
2. What was accomplished?
3. What strengths were displayed?
4. What areas need improvement?
5. Statement of overall rating and recommended action to be taken.
 - ___ Unsatisfactory accomplishments
 - ___ Marginal accomplishments
 - ___ Satisfactory accomplishments
 - ___ Above average accomplishments
 - ___ Outstanding accomplishments

Evaluator's Signature _____

Received by _____ Date _____

CONTROLLING GUIDE 5.--Performance review analysis check list

Instructions:

Use this check list after each staff performance appraisal session to analyze the session.

1. Was the session an adequate review of the staff member's performance during the past year?
 - a. What features of the performance review were missing or inadequately handled?
 - b. What features of the performance review were present and adequately handled?
2. A second function of the session is to maintain or improve the subordinate's performance in the future. How well did the session meet this goal? Specifically, address the goal of helping the staff member to plan on how to maintain or improve his performance in the future.
 - a. Do you think the staff member will change his behavior? Why or why not?
 - b. If the staff member's behavior will change, what changes will occur?
 - c. If the staff member's behavior will change, how long will the change last?

CONTROLLING GUIDE 6. --The CIPP evaluation model*-a classification scheme of strategies for evaluating educational change

	<u>Context Evaluation</u>	<u>The Strategies</u>		
		<u>Input Evaluation</u>	<u>Process Evaluation</u>	<u>Product Evaluation</u>
OBJECTIVES	to define the operation context, to identify and assess needs in the context and to identify and delineate problems underlying the needs	to identify and assess system capabilities, available input strategies, and designs for implementing the strategies	to identify or predict, in process, defects in the procedural design or its implementation, and to maintain a record of procedural events and activities	to relate outcome information to objectives and to context, input, and process information
METHOD	by describing individually and in relevant perspectives the major subsystems of the context; by comparing actual and intended inputs and outputs of the subsystem and by analyzing possible causes of discrepancies between actualities and intentions	by describing and analyzing available human and material resources solution strategies, and procedural designs for relevance, feasibility and economy in the course of action to be taken	by monitoring the activities potential procedural barriers and remaining alert to unanticipated ones	by defining operationally and measuring criteria associated with the objectives, by comparing these measurements with pre-determined standards or comparative bases, and by interpreting the outcome in terms of recorded input and process information

*Stufflebeam (1971)

CONTROLLING GUIDE 6 (con't.)

	Context Evaluation	Input Evaluation	Process Evaluation	Product Evaluation
RELATION TO DECISION- MAKING IN THE CHANGE PROCESS	for decid- ing upon the setting to be served, the goals associated with meet- ing needs and objec- tives assoc- iated with solving problems, i. e., for planning needed changes	for select- ing sources of support, solution stra- tegies, and procedural designs, i. e., for program- ming change activities	for imple- menting & refining the program design and procedure, i. e., for effecting process control	for deciding to continue, terminate, modify or re- focus a change acti- vity, and for linking the activity to other major phases of the change process, i. e., for evolving change activities

CHAPTER V

SUMMARY

The thrust of this dissertation was to develop a monograph presenting a project management system model to be used by project managers. The monograph is presented in Chapter IV.

The intent was to consider educational project management with particular emphasis on the notion that effective people plus effective programs and organization equal effective results. It was assumed that in all projects there is the necessity to set goals, develop programs to achieve those goals, and provide avenues of growth and development for people as they execute the programs to meet the goals.

The dissertation consists of five chapters. Chapter I contains the rationale and review of literature. Chapter II presents the procedures followed in developing the model, and Chapter III presents an analysis of the data gathered to assist model development. In Chapter IV all pertinent information gathered was translated into a practical project management system model.

The dissertation addressed the skills a project manager

needs to effectively plan, organize, implement, and control the people and programs of his project. Attention was also given to organizational components of a model project management system. The skills and system components identified and described included a mixture of management tasks, behaviors, styles, and procedures.

Procedures

In considering the procedures to follow, the writer decided to use four primary sources of information: (1) the literature on management, project management, leadership, decision making, human relations, and communication; (2) a list and description provided by a selected group of project managers in Michigan of the specific skills a project manager needs to be effective; (3) a list and description provided by Michigan State Department of Education of components of an effective delivery system; and (4) field assessments of a preliminary model by two project managers in a large district (over 15,000 students) and one project manager in a small school district (under 3,500 students).

Three techniques were used to gather information. They were: a questionnaire, interviews, and review of the literature. Each technique is summarized in the following discussion.

Questionnaire

The Michigan State Department of Education was approached to secure the names and addresses for a sample of project managers. The primary agencies contacted were the Elementary and Secondary Education Act (ESEA) Title III Office and the Division of Vocational Education and Career Development Services (VECDS). Every project from ESEA Title III and every project from VECDS funded under "Exemplary Funds" were selected as representative of projects in Michigan. Of the seventy-four questionnaires sent, thirty-six returned were useable.

Project managers were asked to rate themselves and choose three skills from skills listed in four areas: physical skills, intellectual skills, intrapersonal skills, and interpersonal skills. Specifically, the project managers responding to the questionnaire were asked to:

Check three skills in each area in which non-effective project managers were most deficient.

Check three skills in each area in which effective project managers were most effective.

Score each skill from one to five, on themselves, using the following scale:

- 5 - Very Effective
- 4 - Effective
- 3 - Minimally Effective
- 2 - Not Effective
- 1 - Very Ineffective

Check the three skills in each area that were most important for a project manager to demonstrate.

There are only eight skills in any skill area that were checked by over fifty percent of the project managers in one or more of the three categories. The skills and percentages by category were:

1. Possesses high energy: most important skills category (100%), effective category (100%), and non-effective category (72%).
2. Speaks fluently and clearly: most important skills category (100%), effective category (100%), and non-effective category (83%).
3. Makes needed decisions: most important skills category (71%), effective category (53%), and non-effective category (35%).
4. Feels self-confidence in self: most important skills category (70%), effective category (66%), and non-effective category (52%).
5. Feels enthusiastic toward job: most important skills category (64%), effective category (63%), and non-effective category (45%).
6. Possesses the "will to win" (drive): most important skills category (61%), effective category (51%), and non-effective category (33%).
7. Demonstrates flexibility and accepts change: most important skills category (53%), effective category (50%), and non-effective category (30%).
8. Organizes staff, money, and other resources to accomplish project goals: effective category (53%), most important skills category (40%), and non-effective category (26%).

The project managers responding to the questionnaire

scored themselves at the effective level in possessing or performing most skills appropriately to facilitate personal and/or group growth toward a desired outcome.

Interviews

Fourteen staff members of the Michigan State Department of Education were selected to be interviewed on the subject of delivery systems.

The fourteen people selected were from the following Michigan State Department of Education offices: nine were from the Division of Vocational Education and Career Development Services, three were from the Elementary and Secondary Education Act Title III, and two were from the Research and Development Division.

The purpose of interviewing the Michigan State Department of Education personnel was to receive their opinions in regard to defining and describing the concept of a delivery system. A secondary purpose was to determine the role of a project manager in planning, programming, implementing, and controlling an effective delivery system. Their input was considered in the development of the project management system model.

Rationale and review of literature

The overall frame of reference for the model was based

to a great extent on the writings of Carkhuff (1969, 1971, 1972).

The scope of the model covered the relationships between individuals involved in a project and how they can and should function.

Five models were reviewed as representative of the literature and research: Contingency Model (Fiedler, 1967); Social System Model (Getzels & Guba, 1957); The Managerial Grid (Blake & Mouton, 1964); 3-D Theory (Reddin, 1970); and Kepner-Tregoe, 1965). Also, management by objectives literature was reviewed (Drucker, 1954; Hughes, 1965; Odiorne, 1969; Humble, 1970; Reddin, 1970; Ross, 1971; Morris, 1972).

A further primary reference for this study was the work of Terry (1960) in defining management. Also of importance was the work of Cook (1971) in terms of defining a project management system.

The topical emphasis of the review literature included the following: project management, management systems, human relations and communication, problem solving and decision making, management types and skills, and management by objectives.

The Use of the Monograph In Chapter IV

In Chapter IV the project management system monograph was presented. The monograph was divided into seven sections:

Section One. -- The Project Management System Model

Section Two. --Planning.

Section Three. --Programming.

Section Four. --Implementing.

Section Five. --Controlling.

Section Six. --Needed Knowledge, Understanding, Attitudes,
and Skills.

Section Seven. --Resources, Glossary and Guides.

The model contains the elements of planning, programming, implementing, and controlling, which function interdependently through people to accomplish goals. It was further suggested that social behavior is accomplished through planning, programming, implementing, and controlling. The action and social behavior is performed by the individual staff members through specific knowledge, understanding, attitudes, and skills. A basic assumption was that a project is planned by people who establish project goals and implement programs to accomplish the goals.

A project management system should facilitate the development of an initial plan of action. Subsequently, the system should provide a vehicle for developing and implementing programs to accomplish the goals.

Planning

Planning was described as a process to prepare for future

activities and events. Planning involves: setting the project purpose and goals, specifying alternative courses of action to accomplish the goals, selecting the best alternative courses of action, specifying contingency provisions, considering environmental factors, establishing a practical timetable, and establishing a preliminary budget to accomplish the goals. It is during the planning phase that an initial project proposal is developed. Good planning allows for flexibility which helps the project manager and his staff prepare for needed changes. A project should be well planned to effectively achieve the project goals.

Programming

Programming was described as a process of developing systematic programs to accomplish the project goals and objectives. Programming includes: establishing the delivery system, selecting and training staff, allocating and structuring resources, finalizing the budget, developing a communication and dissemination system, developing an effective human relations program, and developing methods to solve problems. Programming for a project manager is essentially determining what tasks need to be performed to accomplish the project goals and objectives.

Implementing

Implementing was described as a process of carrying out the programs developed to reach the project goals and includes putting the programs into practice through the utilization of available resources. Implementing includes: effective delivery system, effective communication system, effective human relations, and effective problem solving. Implementing was identified as the next step in a project management system which expands what was done in the planning and programming steps.

Controlling

Controlling was described as a process of establishing standards of performance and conducting regular follow-up to assure that the standards are met. Controlling includes: needs assessment, project evaluation, staff performance appraisal, and recycling of goals and programs. Controlling is exercised at different points in the project. In essence, controlling is a part of each of the other three management system elements.

Needed knowledge, understanding, attitudes, and skills

The knowledge, understanding, attitudes, and skills needed by project managers were identified and described in the monograph.

It was concluded that an effective project manager will demonstrate the knowledge, understanding, attitudes, and skills needed to effectively plan, program, implement, and control his project.

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APPENDIX A

Chapter II Supplementary Items

EXHIBIT A

Procedures Followed to Develop Model

<u>Goals</u>	<u>Experiences and Resources</u>
A. Analyze available information on management, project management, and leadership.	1. Review of literature in Waldo, Business, and Educational Resource Center Libraries.
B. Analyze available information on decision-making methods and models.	1. Same as above.
C. Analyze available information on human relations methods and models.	1. Same as above
D. Analyze available information on communication and the integration process between organizational goals and individual goals.	1. Same as above
E. Analyze available information on specific skills a project manager needs to be effective.	1. Questionnaire to be developed and mailed to a random sample of project managers in Michigan. 2. Review of literature in Waldo, Business, and Educational Resource Center Libraries.
F. Analyze available information on delivery systems.	1. Interview some personnel in Michigan Department of Education for information. 2. Contact by letter local school districts that have received grants to develop a delivery system requesting written information.

EXHIBIT A (Continued)

<u>Goals</u>	<u>Experiences and Resources</u>
G. Use three field assessments of the project management system model.	<div data-bbox="614 240 956 334">3. Review of literature in Waldo, Business, and Educational Resource Center Libraries.</div> <div data-bbox="614 364 956 480">1. Two projects in the Pontiac Public Schools and one project in the Constantine Public Schools were contacted.</div>

EXHIBIT B
Questionnaire

Instructions:

Definition: For the purposes of this questionnaire, a skill is defined as a measurable quality one possesses or is able to perform appropriately to facilitate personal and/or group growth toward a desired outcome.

It is suggested that you score each column separately before proceeding to the next column.

Also, there is space at the bottom of each area (A, B, C, and D) for listing additional skills you believe are not included.

Will you please complete the questionnaire based on the following instructions:

1. Column one is to be used to check three skills in each area (A, B, C, and D) in which non-effective project directors you have known were most deficient.
2. Column two is to be used to check three skills in each area (A, B, C, and D) in which effective project directors you have known were most effective.
3. Column three is to be used to score each skill from one to five for yourself, using the following scale:
 - 5 - Very Effective
 - 4 - Effective
 - 3 - Minimally Effective
 - 2 - Not Effective
 - 1 - Very Ineffective
4. Column four is to be used to place a check mark for the three skills in each area (A, B, C, and D) that are most important for a project director to demonstrate.

Thank you for participating.

Questionnaire (Continued)

<u>Skills</u>	<u>Non- effec- tive</u>	<u>Effec- tive</u>	<u>Your- self</u>	<u>Important Skills</u>
A. <u>Physical Skills</u>				
Possesses high engery level				
Maintains good health				
Maintains body weight and type to height				
Maintains good posture				
Speaks fluently and clearly				
Writes legibly				
Maintains good muscle tone				
Others (Please list)				
B. <u>Intellectual Skills</u>				
Makes needed decisions				
Motivates staff to accomplish project goals				
Defines and describes project goals				
Communicates well in writing				
Delegates to others tasks to be accomplished				

Questionnaire (Continued)

<u>Skills</u>	<u>Non- Effec- tive</u>	<u>Effec- tive</u>	<u>Your- self</u>	<u>Important Skills</u>
Organizes staff, money, and other resources to accomplish project goals				
Analyzes behavior or per- sonality characteristics of different individuals				
Directs and evaluates staff and the implementation pro- cedures to accomplish goals				
Analyzes problems and estab- lishes alternatives to solve the problems				
Organizes thoughts				
Demonstrates creativity				
Develops a positive staff morale				
Others (Please list) _____				
 C. <u>Intrapersonal Skills</u>				
Is self-revealing				
Tolerates ambiguity				
Relieves tension by relaxing				
Feels optimistic and hopeful				

Questionnaire (Continued)

<u>Skills</u>	<u>Non- Effec- tive</u>	<u>Effec- tive</u>	<u>Your- self</u>	<u>Important Skills</u>
Feels self-confidence in self				
Feels enthusiastic toward job				
Has a secure feeling toward self				
Possesses the "will to win" (drive)				
Has faith in staff				
Possesses loyalty to project and overall organization or agency				
Possesses courage				
Others (Please list) _____				

D. Interpersonal Skills

Demonstrates flexibility and accepts change	
Demonstrates tact in dealing with others	
Is a good listener	
Deals with "tense" situ- ation calmly	

Questionnaire (Continued)

<u>Skills</u>	<u>Non-</u> <u>Effec-</u> <u>tive</u>	<u>Effec-</u> <u>tive</u>	<u>Your-</u> <u>self</u>	<u>Important</u> <u>Skills</u>
Communicates well verbally when presenting informa- tion to a group				
Communicates well in a group as a group partici- pant				
Expresses empathy (shows understanding)				
Expresses respect (dis- plays a caring attitude)				
Expresses concreteness (being specific when communicating)				
Expresses genuineness (being "real" as opposed to "phoney")				
Demonstrates confronting skills (telling it "like it is")				
Expresses immediacy (saying on the spot what is going on between you and another person, or what is going on in a group in which you are participating)				
Positively reinforces appropriate staff behavior and ignores or negatively reinforces inappropriate staff behavior)				

Questionnaire (Continued)

<u>Skills</u>	<u>Non- Effec- tive</u>	<u>Effec- tive</u>	<u>Your- self</u>	<u>Important Skills</u>
Demonstrates pride in staff accomplishments				
Others (Please list)				

If you have further comments or suggestions, please feel free to include them. Thank you.

Note:

Your name will not be directly associated with the questionnaire; only the group scores will be analyzed.

Signature

EXHIBIT C

Letter to Michigan State Department of Education
Personnel Confirming Interview

Dear

I am writing to confirm my appointment with you scheduled for

Date	Time	Location
------	------	----------

First of all, thank you for your willingness to allow me to interview you about delivery systems. Enclosed you will find a list of the questions I would like to ask you, along with definitions of the terms planning, programming, implementing, and controlling.

As you know, I am presently enrolled in the Doctoral Program at Western Michigan University. Part of the responsibility in the Doctoral Program is to write a dissertation. My dissertation is on the subject of Project Management and will be developed into "A Project Management System Model." The purpose of the dissertation will be to develop a monograph that can be a practical guide for a project director to organize, implement, and evaluate his project.

I am very interested in your ideas relative to delivery systems. Further, it is anticipated the interview should last about 45 minutes.

Thank you for your time and cooperation, and I look forward to meeting with you. Also, if you have questions before the interview, please contact me.

Sincerely yours,

Robert P. Hamet
903 Pinehurst Blvd.
Kalamazoo, Michigan 49007

Enclosures (2)

EXHIBIT D

Michigan State Department of Education
Personnel Interview Questions

1. How would you define and describe an effective delivery system?
2. What are the essential components or parts of an effective delivery system?
3. What is the role of a project manager in planning an effective delivery system?
4. What is the role of a project manager in programming an effective delivery system?
5. What is the role of a project manager in implementing an effective delivery system?
6. What is the role of a project manager in controlling an effective delivery system?
7. What items should be included in the monograph that would be helpful to a project manager?
8. Other comments:

EXHIBIT E

Organization Components Definitions

Component Title: Planning

What is planning?

Planning is a process to prepare for future activities and events and involves: setting the project purpose and goals, specifying alternatives to accomplish goals, choosing an alternative, specifying contingency provisions, considering the environmental factors and establishing a practical timetable.

Component Title: Programming

What is programming?

Programming is a process of developing systematic programs to reach project goals and includes: establishing delivery system implementation steps, selecting and training staff, allocating and structuring resources.

Component Title: Implementing

What is implementing?

Implementing is a process to carry out the programs developed to reach project goals and includes putting into practice through the utilization of available resources: effective delivery system, effective communication system, effective human relations and effective problem solving.

Component Title: Controlling

What is controlling?

Controlling is a process of establishing standards of performance and conducting regular follow-up to assure the standards are being met and includes: delivery system evaluation, needs assessment, staff performance appraisal, and recycling of goals and programs.

APPENDIX B

Chapter III Supplementary Items

EXHIBIT F

Michigan State Department of
Education Personnel Interviews

Question one: How would you define and describe an effective delivery system?

RespondentsResponses

- | | |
|---|--|
| 1 | An effective delivery system should be measured by some accountability model or standard. Essentially, then, an effective delivery system is the sum total of an effort to achieve the big goals and objectives for the project. Included are all the mechanisms and activities needed to achieve the stated goals. |
| 2 | An effective delivery system would be one that contains five or six components of the Michigan Department of Education Accountability Model. |
| 3 | An effective delivery system is a product of a well thought out set of philosophical assumptions. Out of the assumptions flow goals, objectives, and activities that attempt to accomplish the goals and objectives. The critical value is people, and one orders those people to accomplish the goals and objectives. |
| 4 | A delivery system is a term that is used to describe all that goes into education. An effective delivery system combines the instructional and supportive staff, equipment, materials, curriculum, and other resources into the most efficient and economic way to facilitate the instructional program. The ultimate outcome is to meet the predetermined performance objectives in the most effective way. |
| 5 | A delivery system is a set of activities to meet the stated needs. The effective delivery system would meet the needs of the client group. |

EXHIBIT F (Continued)

RespondentsResponses

6

An effective delivery system helps determine what needs to be done; subsequently helps determine if the needs were met.

7

There are two levels to a delivery system: the administrator or manager level and the doer, researcher, or implementor level. The individual at the administrative or managerial level must have management skills. The manager must manage the people and other resources in the project by the best possible means to meet the goals and objectives. These goals and objectives should be written so that they have a good affect on the target population. Further, the goals and objectives should be stated in performance terms, and evaluation instruments should be developed that will measure how well the goals and objectives are accomplished.

8

A delivery system could be defined as those activities and methodologies to produce a product that can be saleable to other situations, or it can be defined as direct services to clients. An effective delivery system is where there is communication from the top down and from the clients up.

9

An effective delivery system, when implemented, achieves the performance objectives. A delivery system, in effect, is what happens to the clients in terms of performance objectives. In essence, the effective delivery system is one that can directly relate to the successful achievement of the performance objectives. Additionally, an evaluation should determine whether the delivery system did, in fact, lead to achievement of the performance objectives.

EXHIBIT F (Continued)

<u>Respondents</u>	<u>Responses</u>
10	A delivery system is the use of all human and material resources to achieve predetermined performance objectives.
11	An effective delivery system is one that works or does what it proposes to do.
12	An effective delivery system is a means or method of providing services to clients. The delivery system is also a distinct unit of service and should be subjected to analysis from without as well as within.
13	An effective delivery system is one in which the project objectives are attained. The delivery system must also be efficient in terms of time and money. Furthermore, to be effective, the delivery system must help change clients.
14	An effective delivery system is a delivery system that leads to achievement of the overall objectives.

Question two: What are the essential components or parts of an effective delivery system?

<u>Respondents</u>	<u>Responses</u>
1	An effective delivery system must have the following components: (1) target population, (2) specific goals and objectives addressing the target population, (3) organizational structure, (4) mechanism to assure good communication (adequate communication is directly correlated to meeting the project goals and objectives), (5) evaluation mechanism based on the achievable goals and objectives, (6) effective staff, (7) game plan, (8) methodologies to achieve the project goals and

EXHIBIT F (Continued)

RespondentsResponses

objectives, (9) periodic monitoring and assessment of results, and (10) involvement of target population and staff in planning.

2

The components include the following:

1. goals.
2. performance objectives (the performance objectives included: conditions, activities and measurement).
3. delivery system that meets the goals and objectives.
4. evaluation or validation process that determines whether the delivery system was effective and can be transported to other situations.
5. recommendations.

3

The programming is the design or how to accomplish the goals. The essential components include:

1. assessing the effectiveness of the different activities.
2. effective human interaction of people as they go on an adventure together.
3. writing and designing the project so that everything fits together.
4. staff expectations for clients.
5. student or client perceptions of how teachers and others evaluate them.
6. student's sense of control in the social system.
7. student's perception of the concern of the teacher.
8. student's perception of the academic norm of the school.

The most important variable or component is the learning climate that exists. How the student feels about the learning climate determines whether or not he will learn.

EXHIBIT F (Continued)

RespondentsResponses

- | | |
|----|---|
| 4 | The components include: (1) supportive and instructional members, (2) physical items such as facilities, equipment, and others, (3) curriculum. |
| 5 | The components include: (1) identification of the problem, (2) establishment of necessary outcomes, (3) specification of goals, objectives, and activities for each goal and objective, (4) money, (5) staff, (6) administration support. |
| 6 | The resources used to assist a client in accomplishing some predetermined outcome are the components and include: (1) a plan; (2) grade level performance objectives; (3) constant and ongoing evaluation; (4) research analysis and validation; (5) dissemination of information; (6) a management system; (7) in-service and pre-service education. |
| 7 | Speaking from the point of view of the project manager, the manager must: (1) know how to state the goals and objectives, design the delivery system, and effectively evaluate the effectiveness of the program; (2) use sound fiscal management; (3) possess organizational and managerial skills; (4) provide staff training; (5) implement interpersonal skills and human relations programs; (6) communicate the need for project changes to the appropriate funding source and top administration; (7) possess public relations ability or skills. |
| 9 | The parts in the Michigan State Department of Education Accountability Model are the essential components of an effective delivery system. |
| 10 | What the teachers do with the clients or students are the components. |

EXHIBIT F (Continued)

RespondentsResponses

- | | |
|----|---|
| 11 | The components include: (1) human resources; (2) materials involved; (3) fiscal resources to meet cost requirements; (4) facilities; (5) support system (i. e., board of education, top administration, etc.); (6) compatible political milieu. |
| 12 | The essential components of a delivery system include: (1) organizational structure, (2) methodology, and (3) cost or economic implications. |
| 13 | The components include: (1) clearly stated objectives; (2) specific timetable; (3) method of evaluation; (4) people that can do the job. |
| 14 | The components include: (1) staffing; (2) facilities; (3) equipment; (4) financial resources. |

Question three: What is the role of a project manager in planning an effective delivery system?

- | | |
|---|---|
| 1 | Frequently, much of the initial and ongoing planning for a project precedes the entry of a project manager. If the project manager comes into the project subsequent to the goals and objectives being established, his first activity should be to assess the quality and achievability of the goals and objectives. If the goals and objectives need to be modified, the project manager should proceed to modify them. In essence, the main role of the project manager in planning is to assure that quality goals and objectives are developed. Additionally, he must help develop the basic purpose and strategy needed to meet the goals and objectives. |
|---|---|

EXHIBIT F (Continued)

RespondentsResponses

Planning permeates all four components in the project management system. For example, if after one monitors or evaluates the project, there may be a need to redefine goals. As a result, there is again a need for planning.

Essentially, the project manager is the catalyst from which planning proceeds. Accordingly, effective project managers are those that are creative, can organize their own thoughts, and can help organize the thoughts of other people.

- 2 Usually the project manager is not involved at the beginning of a project. The project proposal is usually submitted and approved previous to the project manager's being hired. Therefore, the project manager must identify and agree with the project goals to implement them appropriately.

In any rate, the project manager should develop activities and establish target dates for accomplishing the goals. Also, the clients involved in the project should be involved in the planning. The clients could be business people, parents, or students. Also, community resources must be used.

- 3 It takes a total school system and community to operate a project. One of the primary roles of the project manager is to involve other people in the planning. Accordingly, the manager's first step should be to meet with anyone in the school system that can enhance the project to determine how they can be supportive. Support must be marshalled for the project from within and without the school system.

- 4 Leadership for and the ultimate success of the project is dependent more on the project

EXHIBIT F (Continued)

RespondentsResponses

manager than any other person. Moreover, the project manager's frame of reference should be an accountability.

5

It takes a different type of person to plan a project than to implement one. The better the project is written in terms of specifying goals, objectives, and activities, the greater the probability it has of being successful. Also, the goals, objectives, and activities should be mutually agreed upon. Lastly, it is important for the person hiring a project manager to hire the "right" type of person.

6

Typically, project managers spend considerable time in the programming and implementing phases and little time in the planning and controlling phases. In the ideal world, the project manager should be involved in all four phases. The planning requires someone that is able to conceptualize well and be able to put ideas on paper. Further, a project manager must have a sufficient number of skills in many areas if he is going to handle all four phases of the project effectively.

7

A project manager should be able to conceptualize an idea and develop goals and objectives in performance terms.

8

In terms of management, there are management practices that have been practiced for years that have proven to be effective. The significant variable is whether one as a project manager has the skills, understanding, and knowledge to effectively use proven management practices. Further, the manager's role falls somewhere in the support system. He must manage his resources, be sensitive to the needs of staff, and be ready to help facilitate needed changes.

EXHIBIT F (Continued)

RespondentsResponses

- 9 The project manager's role is primarily a facilitator. The manager should definitely be involved in establishing goals, possibly unilaterally. However, a project manager must rely on his staff to assist him in planning.
- 10 The project manager should implement a system of participatory management. His primary role is one of being a facilitator.
- 11 Whenever possible, the project manager should be the person who wrote the proposal. He should be intimately involved in every aspect of the project and understand it.
- A delivery system is the sum total of the activities operationalized through people to reach the desired outcomes. The primary role of the project manager in the delivery system is to manage the overall operation of the project. He should be an initiator of things. Also, he must work cooperatively with his staff to plan and subsequently implement activities to meet the project goals.
- The best projects are those where the project manager involves his staff in all decisions. The project manager that has the attitude, "I'm the leader, and all you people follow," is going to be in trouble. The manager, on the other hand, that brings people along together will be more successful. In essence, people are the significant variable in an effective delivery system and must be committed to the delivery system for it to be effective. The role of the project manager should be one of coordinating, initiating, and facilitating as opposed to directing.
- 12 Each project is different. Accordingly, the planning stage sets the direction for the project. Initially, the project manager should

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utilize confrontation skills with the funding source for feedback of good and bad points. In that sense, the project manager needs to be an aggressive person. He must be a risk taker, be willing to involve other people, and be willing to arrive at consensus through the involvement of others. To that end, and as a result, project effectiveness is directly affected by staff supportiveness. Accordingly, it would be good for a project manager to frequently question what is happening in the project from the point of view of self-renewal contained in John Gardner's book (1965) on the same subject. There must be communication up and down within the total system that the project is operating. Communication is needed between staff members and also in the interfaces between the clients and staff, the staff and manager, and the manager and staff to the top administration and board of education.

- 13 The role of the project manager varies dependent upon the size, scope, and type of project. Frequently, projects are already established before a project manager is hired. At any rate, the project manager should have a role in planning.

- 14 The project manager must specifically define the project clients and develop a support system to help meet the overall goals. Included in the support should be staff to help achieve the project goals.

Question four: What is the role of a project manager in programming an effective delivery system?

- 1 Essentially, the project manager's role is to provide the leadership and organizational

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ability to help develop the methodology to meet the goals and objectives.

2

It is the role of the project manager to assure that operations and activities are established to effectively meet the project goals and objectives. He should do some of the project activities himself and should delegate others.

3

The project manager should coordinate an effort to translate the project goals into curriculum modules and tasks that can assist in accomplishing the goals. He should assure that everyone involved in the project understands the goals and curriculum and should be concerned with client outcomes.

4

The project manager needs to do the following: (1) develop a calendar of events and a work flow chart; (2) develop the program based on the goals, objectives, and accountability model; (3) work with each staff member in preparing the calendar of events.

5

A project manager must be able to deal effectively with other people. The type of project would dictate the characteristics needed.

7

The project manager should look at the objectives and assess where the project is and define and describe how the project resources need to be developed to meet the goals and objectives. Organizing the resources and hiring the right people to get the job done is an important manager function.

Frequently, when a project is implemented, it is found the original project goals and programs will not facilitate the most desirable outcomes. As a result, a project manager

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should continually facilitate efforts to modify and improve the project goals and programs.

Formative evaluation is required during the programming phase. A project manager needs to continually assess what is happening in the project so that necessary modifications can be made.

9

The project manager's main role is to allocate resources. He must assure that the staff has the necessary resources to implement programs to achieve the project goals. At this point, he should be involved in formative evaluation to determine how the plans are being implemented.

10

A project manager should frequently assume responsibility for programming unilaterally. He should assure that a timeline is established to implement programs to meet the goals and objectives. Also, he should take primary responsibility for developing a budget.

11

The project manager should develop the delivery system. A critical element is for the project manager to have the authority to program the delivery system. His involvement is a coordinating role.

13

The smaller the project, the more responsibility a project manager has for actually developing programs. The larger the project, the more responsibility he has in supervising and managing the work of others.

Question five: What is the role of a project manager in implementing an effective delivery system?

1

The project manager's role is to provide leadership in the following areas: problem

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solving, communication, in-service education, etc. Further, the effective project manager will anticipate problems and needs. He needs to respond quickly and directly to problems. Also, it is his responsibility to lead an effort to reassess the activities to determine if they are or are not on target. Probably the term that would signify the role of a project manager during the implementation phase is implementor.

- 3 A project manager must ask the right questions to get the right answers. There is a need for continuing assessment of the achievement of the clients or students to determine why they are or are not learning.
- 4 A project manager should assure that staff members carry out their part of the calendar of events.
- 9 A project manager should assure that staff have necessary resources. At this point, the primary role of the project manager in decision making is one of evaluation and problem solving.
- 10 A project manager is primarily a monitor and a facilitator.
- 13 The project manager should be in the position of advising the project staff. He should also assist staff in such ways as the following: (1) where to get help, (2) where to get resource people.
- Essentially, the larger the project, the less time the project manager will be involved in implementation.

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Question six: What is the role of a project manager in controlling an effective delivery system?

- 1 Effective evaluation is entered into by all parties at all levels in an organization. Essentially, the role of a project manager is one of coordinating evaluation and control activities. He must understand the original project goals and objectives and continually assess whether or not the activities and goals need to be modified. The significant point is that evaluation instruments should be prepared early in the life of a project to assure their being functional. Part of programming, then, is determining the evaluation methods and instruments. Possibly the best evaluation of a project manager is to determine how well he initially structured the project.
- 2 A project manager makes provisions for ongoing assessment of the project. The evaluation should be done by an outside source.
- 3 Key questions must be asked relative to what is being accomplished.
- 4 The controlling function is an extension of the implementing function. A project manager should implement other checks and balances, and needed modifications should periodically be implemented.
- 8 A project manager must be alert to get the right kind of inputs to determine if the project is on target. Controlling is linked to the other three phases of the management system. In essence, a project manager must respond to the inputs.

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9	Controlling should take place continually.
10	A project manager must develop a system for assessment and evaluation. He must have some kind of assessment instrument to assess standards of performance. Lastly, he must be assured of receiving appropriate data from which to make necessary decisions.
11	In essence, a project manager's role is coordinating. He should be involved in how the project evaluation design is put together. He should also be involved in facilitating the correction of data and aggregating that data. Lastly, he might do the needs assessment himself or coordinate the activity.
13	The project manager must be in control of the project at all times. Control is to assure that activities and events are on schedule.
14	The project manager will need to have expertise in identifying needed evaluation and resources to carry out the evaluation. Larger projects will normally have sufficient funds so that outside evaluation people can be secured. In smaller projects, the project manager may need the expertise in evaluation himself to implement an evaluation program.
<u>Question seven:</u> What items should be included in the monograph that would be helpful to a project manager?	
2	The items of importance that should be highlighted include: (1) adequate functioning in terms of interpersonal skills (listening, responding, etc.); (2) the project manager must be committed to the project and its goals.
4	The list should include:

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1. accountability model.
2. specify outcomes in performance terms based on quality standards and target dates.
3. evaluation plans that make sense.
4. examples of a calendar of events and activities and flow charts.
5. planning that aids in eventually continuing the project if it is successful.
6. methods of informing key decision makers and the community.
7. adequate communication and dissemination system.
8. where possible, good to use a control group to compare with the experimental group.

5 Included should be: (1) check lists that would identify basic problems; (2) check lists for evaluation purposes.

6 The following should be included: (1) the project manager should know why the top administration and board support the project. It is also necessary to know how the project goals and objectives interface with the overall goals and objectives of the organization. (2) The project manager should believe in what the project is attempting to do. (3) There is a need for plans to transfer the project to other situations. (4) Methods of communicating results to top administration and others.

7 The monograph should be written so that it addresses itself to the population who have not had training as managers. Accordingly, it would be written in a way that the people will understand basic business management practices. It should specify how a project manager should develop an effective delivery system. It should also contain the psychological implications of working with staff. For example,

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there may be some resentment on the part of a building principal if a project manager uses staff out of his building. As a result, the manager should be aware of the social climate as it relates to his working relationships with other administrators and staff.

8

The most important item that should be included is a description of the management skills needed by a project manager.

9

The basic item that should be included is: accountability model (the projects that don't have accountability tied to them are utilizing money on a random basis rather than on a directed basis).

10

A project manager must: (1) balance theory and practice. For example, in the area of personnel management, give project managers some kind of bibliography; (2) provide some examples or simulations (maybe put it together in the form of a loose leaf booklet so that people can do with it what they want; (3) make it a self-instructional document; (4) caution the people the real world may be different than the theory or practice prescribed in the monograph. A project manager can become too involved in established time-lines, developing budgets, etc., and lose the real important human interaction elements and needed creativity elements.

11

The items a project manager should include are: (1) maintain control over hiring competent staff; (2) good relationship with the person responsible for the cash flow; (3) be able to handle confrontation and conflict; (4) possess management skills; (5) there must be congruence between goals and objectives of the

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project and the goals and objectives of the organization sponsoring the project.

12

Most project managers are new; and, with that in mind, the following things should be included: (1) a list of resources (i.e., people, places, etc.), (2) sample contracts contained so that people can understand how to contract services, (3) examples of successful projects.

13

The important items for a project manager include: (1) know how to set goals; (2) knowledge about development of performance objectives; (3) know how to develop realistic budget; (4) know how to select competent staff; (5) be able to anticipate the results of the project.

14

The important items include: (1) a handbook on key contact people; (2) dissemination of information and dialogue opportunities with people from other projects; (3) provision for in-service.