THE DEVELOPMENT OF MANAGEMENT SYSTEMS FOR A HIGH SCHOOL ACADEMIC DEPARTMENT

Dissertation for the Degree of Ph. D.

MICHIGAN STATE UNIVERSITY
ROBERT ROYAL

1974

This is to certify that the
Robert Royal
thesis entitled

THE DEVELOPMENT OF MANAGEMENT

SYSTEMS FOR A HIGH SCHOOL
ACADEMIC DEPARTMENT
presented by

Robert Royal

has been accepted towards fulfillment
of the requirements for

PH.D. degree in Education
(Curriculum & Instruction)

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Date 5-30-74

O-7639

ABSTRACT

THE DEVELOPMENT OF MANAGEMENT SYSTEMS FOR A HIGH SCHOOL ACADEMIC DEPARTMENT

By

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Problem

The problem is to design a theoretical model using the systems approach that can be used in the management of a high school academic department by the chairperson. This model will assist the chairperson in carrying out the basic responsibilities of a department; e.g., maximum use of resources, management of personnel, projection of departmental needs, initiation of public service projects, determining the impact of adding different programs, and the improvement of the affective and cognitive achievement of students.

Procedure

This is a creative-library-reference-materials study; therefore, two procedures are used: (1) literature is studied that deals with systems management, and this writer extrapolates relevant materials which are appropriate to a high school academic department, and (2) on the

basis of the writer's experiences other inclusions about systems management applied to an academic department are made.

Results

A systems model for a high school academic department is developed. The model makes use of the following entities of a systems approach: problem identification, goal statement, writing of performance objectives, development of strategies for accomplishing objectives, take action, a systematic follow-up, evaluation and reiteration. A rationale is presented for using each of the aforementioned parts of a model, and examples are provided with respect to how to use each part of the model.

THE DEVELOPMENT OF MANAGEMENT SYSTEMS FOR A HIGH SCHOOL ACADEMIC DEPARTMENT

By

Robert Royal

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Secondary Education
and Curriculum

1974

DEDICATION

To my late father, George Royal, and my mother, Mrs. Mary Lewis Royal, whose early sacrifices and love paved the way for this moment.

ACKNOWLEDGMENTS

Many people are responsible for the successful completion of this dissertation.

The writer is deeply grateful to Dr. George R. Myers, chairman of my doctoral committee, for his genuine interest, scholarly suggestions, and encouragement.

The writer further wishes to thank the members of the guidance committee.

A special thanks to Dr. Donald Nickerson for his scholarly advice and on-going assistance throughout my stay at Michigan State University.

The writer will be forever grateful to Dr. Lloyd M. Cofer, whose support and practical advice were invaluable.

And the writer's greatest debt is to Dr. Richard L. Featherstone, director of the dissertation, for his work and interest in the field, for the continuing dialogue that developed my interest, and for his perceptiveness and untold patience.

To Drs. Bernard Levine, Calvin Moore, William Rasschaert, and Ms. Florence Hill and Ms. Eleanor Jones, my special thanks.

To Ms. Fran McMullen who edited the dissertation and Ms. Chella Lewis who did the typing, my eternal gratitude.

And finally my thanks to those too numerous to mention for their untiring efforts.

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CHAPTER I

INTRODUCTION, PROBLEM, LIMITATIONS OF THE STUDY, AND DEFINITION OF TERMS

Introduction

Demands for greater accountability on the part of schools relative to the academic achievement of students are being heard from all segments of the population. Leon Lessinger, writing in one of the official organs for educators, said:

> Questioners in the past were content to listen to accounts of resources allocated. This has changed. Today the questions focus on results obtained for resources. The questions are pointed, insistent and abrasive. The public school system is being held accountable for results.[1]

Yes, the public school systems are being held accountable for the academic achievement of students; however, the lack of progress is no longer being blamed on students. The outcry for better results is directed at individuals who are elected to make policies and personnel who are salaried to implement the policies. "No longer is the blame being put on the student when he fails, it is

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[1]Leon Lessinger, "Engineering Accountability for Results in Public Education," Phi Delta Kappan, LII (December, 1970), 217.

being placed on the school board, the superintendent, the principal, the teacher. All are being held accountable."[2]

Whatever meanings the term accountability has acquired, this much is clear: the term consistently means placement of responsibility. In the past, teachers were evaluated upon years of experience, academic study, and participation in professional organizations. Administrators were primarily judged on their public relations images. School board members were evaluated on their abilities to provide adequate finances. All of this is changing, for teachers, principals, and school boards now have to answer to the concerns of the public about the academic achievement of students.

The demands for better academic achievement on the part of students pose problems for personnel who are salaried to implement policies and justify results that students obtain on evaluative instruments. The evaluation of students on academic achievement or the cognitive domain to the exclusion of the affective domain needs reviewing. It is a common belief among some educators that the attitude students have toward an academic discipline is crucial with respect to whether they are favorably disposed to studying it. Do students accomplish the homework tasks assigned to them within the limitations of their abilities? The students

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[2]Malcolm Besson, "Overtones," Music Educator, LIX, 1 (1972), 5.

must be committed to a set of values that would obligate and make them duty-bound to do the homework. What about the parents' attitudes? Do they encourage students and try to provide the best conditions for study within the limits of their resources? Does the community exemplify a favorable attitude toward helping the students achieve academically? Teacher behavior and attitude are related to the academic achievement of students, too. Certain kinds of teacher behavior and attitude foster ingenuity, originality, independent thinking, use of imagination, and other qualities associated with creativity. Torrance presented principles of teacher behavior and attitude which enhance creative growth in Rewarding Creative Behavior.[3] In a series of experiments, he was able to help teachers learn how to identify various kinds of creative expressions in both academic and non-academic areas and to use behaviors which would "reward" creative behavior. His work shows that creativity is more often inhibited than fostered in most classrooms but that awareness of one's behavior, as a teacher, as it affects creative expression, can lead to improvement in creative output by the students in the classroom.

Reaction expectation is another qualitative factor in the affective domain that is related to how students

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[3]Ellis Paul Torrance, Rewarding Creative Behavior (Englewood Cliffs, New Jersey: Prentice-Hall, 1965).

learn. Careful consideration of "data" regarding the anticipated reactions of students, parents, staff, and community to a proposal becomes "information" in a qualitative sense. Parents and teachers alike through tone of voice, facial expression, touch, and posture communicate their expectations to students. Rosenthal and Jacobson[4] presented evidence to substantiate the statement, "What a teacher expects to happen with individual students or with a class tends to come true." They reported in their study that teachers were told by psychologists that specified students would make gains in I.Q. Not only did the teachers perceive the students as growing more intellectually, the students did make significant spurts in I.Q. measures. This study indicates teacher behavior and student learning do seem to be related to teacher expectations.

Necessary consultation is a qualitative factor essential to effective management. Acting upon "data" with respect to who desires to be consulted about what is a part of the affective domain. Communication among parents, students, staff, and community is essential if we are to help students improve academically.

Another problem associated with accountability and the academic achievement of students is the philosophy that

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[4]Robert Rosenthal and Lenore Jacobson, Pygmalion in the Classroom (New York: Holt, Rinehart and Winston, Inc., 1968).

the school community holds with respect to the way students learn.

Some of the most prevalent learning theories are those promulgated by B. F. Skinner,[5] Jerome S. Bruner,[6] Jean Piaget,[7] and Robert M. Gagne.[8] B. F. Skinner believed that a person comes into this world with nothing. It was his theory that learning is gained through the environment, and a person should be rewarded for emitting the correct response. When a person has had enough experience in the environment, he is ready to learn; therefore, it was Skinner's belief that programs should be provided for students whereby they can work at their own rate. Jerome Bruner began with the hypothesis that any subject can be taught effectively in some intellectually honest form to any child at any stage of development. To put it another way around, with equal validity: Jerome Bruner was saying put the lessons in terms that students can understand. Robert Gagne believed in a hierarchy of skills. As one masters or gains a mastery of more difficult skills, he becomes motivated. The mastery of the difficult tasks

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[5]B. F. Skinner, Beyond Freedom and Dignity (New York: Random House, 1971).

[6]Jerome S. Bruner, The Process of Education (New York: Random House, 1960).

[7]Barry Wadsworth, Piaget's Theory of Cognitive Development (New York: David McKay Co., Inc., 1971).

[8]Robert M. Gagne, The Conditions of Learning (New York: Holt, Rinehart and Winston, Inc., 1970).

becomes a source of satisfaction for a student, and this generates a desire for improvement. Jean Piaget believed in stages of development. The major factors in cognitive development are the interaction of maturation, experience, social interactions, and equilibration. The implication of Piaget's theory for educators is that curriculum sequences should be designed with the students' cognitive status in mind. If curricula do not consider the students' levels of conceptual development, learning will be ineffective.

Recognizing the multiplicity of factors associated with learning and accountability, a plan is needed to deal with these matters if we are to help students achieve better.

Statement of the Problem

The problem is to design a theoretical model using the systems approach that can be used in the management of a high school academic department by the chairperson. This model will assist the chairperson in carrying out the basic responsibilities of a department; e.g., maximum use of resources, management of personnel, projection of departmental needs, initiation of public service projects, determining the impact of adding different programs, and the improvement of the affective and cognitive achievement of students.

Proponents of management science and systems models hold to the idea that a systems model will make the individual

accountable, for it indicates and evaluates what each person does.

Need for the Study

As more theories of learning and how people learn are developed, as better methods of teaching are developed, it is logical to expect staff to justify what it is doing. Inasmuch as teachers in an academic department are frequently the first ones blamed because students do not meet the expectations of many segments of the school public, there is an urgent need to provide information about accountability with respect to an academic department.

It is crucial that a program of integrity and merit be developed explaining philosophy, strategies, and pitfalls of accountability as applied to an academic department. Terrel H. Bell, Deputy Commissioner for School Systems, U.S. Office of Education, stated it this way:

> We cannot meet this challenge without more sophistication from school systems of the nation in measuring student performance. Our sophisticated, scientific, and production-oriented educational system is demanding a more sophisticated, scientific, and production-oriented educational system. Accountability is the key word in all of this for it implies goal-directed and performance-oriented educational leadership. It implies analysis of feedback and correction of the aim to more accurately focus on targets.[9]

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[9]Terrel H. Bell, "The Means and End of Accountability," Proceedings of the Conference on Educational Accountability (Princeton, New Jersey: Educational Testing Service, March, 1971), p. 5.

Systems: Rationale and Evaluation of Systems Approach

In order to meet the wide range of needs and expectations promulgated by the many publics served by a school system, a better procedure for making decisions is necessary. Management systems which have proved successful in some industries and government are being instituted to provide educational leaders with workable models for making decisions.

A system is a set of elements whose relationships are designed to accomplish a desired goal. Among the elements in a system are problem identification, establishment of priorities, goals, objectives, inputs, outputs, environment, programs, decision-makers, measures of effectiveness and recycling. A model will be developed to show the interrelationship of all these elements.

Evaluation of Systems Approach

Once the model is developed for a high school academic deparmtnet, a hypothetical situation will be logically carried through using the elements presented in the model.

Definition of Terms

In order to reduce the chances for misinterpretations, the following definitions of terms are presented.

Department: In the generic sense, refers to the components of a school system that has a particular academic interest area.

Department Management Systems: A management model designed to assist department members under the leadership of a chairperson in assessing the allocations of department resources for the optimum achievement of students.

Goal: A statement that proposes general levels of proficiency to be achieved. Goals are achieved through accomplishing objectives.

Objective: An observable achievement accomplished under specified conditions.

Philosophy: A composite statement based upon beliefs, concepts, attitudes from which the educational intent is derived.

Authority: A decision-making level; the power and mandate to act (authorization of delegation of decision making stems from a "supervision" role).[10]

Responsibility: An obligation for outcomes relating to specific and ancillary management functions requiring decisions.[11]

Accountability: The chronicle(s) of communication; to whom, how, and when the decision maker reports in relation to the functions for which he is responsible.[12]

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[10]Richard L. Featherstone, The Development of Management Systems for the Academic Department (National Center for Higher Education Management Systems, 1972), p. 5.

[11]Ibid.

[12]Ibid.

School Public: The school public is a term used to identify all persons who have interest and/or commitment to the functions of a school.

Information: Mixes of collection of data that attain value when considered in relationship to a specific objective.

Procedure

This is a creative-library-reference-materials study; therefore, two procedures are used: (1) Literature is studied that deals with systems management, and this writer extrapolates relevant materials which are appropriate to a high school academic department; and (2) On the basis of the writer's experiences other inclusions about systems management applied to an academic department are made.

Limitations

No researcher has attempted to develop a systems approach in the management of a high school academic department involving the cognitive and affective domains; therefore, this thesis is a creative-library-reference-materials study. Those limitations the writer attributes to himself include (1) lack of knowledge of systems work, terminology, and use of systems models; (2) systems models; and (3) the emotional bias of an individual completing eight years of work as an English Department Chairperson in a complex organization.

The limitations stated above are common to a creative study or the development of a model that is going to deal with human behavior. There is no need to avoid this type of research because of these limitations. Rather, there is a definite need to further apply and refine the methods used in this type of study to better understand and obviate the limitations and increase our knowledge of systems management applied to an academic department.

Overview

Chapter II deals with a review of related literature. Herein are discussed the most widely accepted theories of management: (1) scientific management, a school of thought where the advocates seek order and stability in all matters; (2) administrative management, a school of thought where rules and principles are used to insure efficient and effective operation of an organization; and (3) humanistic management, a school of thought where advocates adhere to the belief that individuals bring to the organization: attitudes, values, and goals; and management must incorporate these concerns for effective operation.

Literature that is related to model theory is reviewed. The advantages and disadvantages of using models with respect to solving problems are discussed. Widespread attention is being given to the management team concept and its relationship to decision making; therefore, literature which speaks of the management team concept is reviewed.

Performance objectives are an integral part of the management systems approach, and these objectives have caused much concern on the part of many segments of the educational public; thus literature relative to the advantages and limitations of performance objectives is reviewed.

Department heads are key personnel with respect to the operation of an academic department, and, as a result, literature with respect to what their roles can and should be is reviewed.

In Chapter III assumptions are developed and validated about the following entities of a systems model for a high school academic department: programs, finance, students, facilities, community, and personnel.

The writer develops hypotheses and presents a management systems model for a high school academic department in Chapter IV. The model deals with the basic elements of systems management and procedures for identifying problems, selecting priorities, gathering data, and evaluation.

Chapter V concludes and discusses forces, external and internal, which influence the chairperson's decisions. A chart showing the internal and external factors which influence a department chairperson's decisions is presented. Among the matters included in the internal forces are: size of the school, the number of teachers, internal communications, homogeneity of faculty interests, other department chairpersons, and expectations of students, teachers,

superiors, and central and regional administrators. Included among the external forces which influence a chairperson's decisions are: professional groups, department image, personality of the chairperson, the press, researchers, and the character of the school.

Implications of the development of a model for a high school academic department and recommendations for further study are included in Chapter V.

CHAPTER II

RESEARCH RELATED TO THE MANAGEMENT SYSTEMS APPROACH IN SCHOOL ADMINISTRATION

As the literature was examined an effort was made to consider the following main topics for inclusion in the ensuing review of research:

1. Philosophies of management systems
2. Literature related to model theory
3. Research related to the management team concept
4. Advantages and limitations of behavioral objectives
5. The department chairperson in a large high school

The literature of education is literally sprinkled with references to the various aspects of management systems which can be applied to a high school academic department. In an effort to find new insights and understandings of the systems approach, the writer attempted to go beyond the tangles of charts and complex diagrams to provide the reader with explanations of the concepts and methodology permeating the writings of authors' works which are reviewed in this section.

Philosophies of Management

There are at least three philosophies of management systems which are widely accepted by scholars and schools of management: (1) Scientific Management, (2) Administrative Management, and (3) Humanistic Management.

Scientific Management

The focal point of the Scientific Management school of thought is that man seeks order and structure in his environment. An attempt is made by advocates of this school of thought to seek order and stability in all matters. During the latter part of the nineteenth century, Frederick W. Taylor, the "Father of Scientific Management,"[13] and others analyzed the basic tasks of the individual worker. The purpose was to reduce each workman's task to the smallest, most specialized unit of work possible, thus eliminating any doubt about the expected outcomes. From this simple start Scientific Management has broadened its scope. Evaluative instruments have been designed to measure the intellectual potential of the individual in order to fit the "right person" for the right task on a predetermined basis. One of the chief criticisms of Scientific Management as it relates to school situations is that the environment and people and constantly changing, and it is difficult, if not

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[13]Frank B. Copley, Frederick W. Taylor, "Father of Scientific Management" (New York: Harper and Brothers Publishers, 1923).

impossible, to keep the predictiveness of the Scientific Management System intact.

Administrative Management

Rules and principles used to insure efficient and effective operation of an organization are the trademark of the Administrative Management System. The rules of management set forth are supposed to have "universal application." Basically, those people who believe in the Administrative Management concept would say that being friendly with one's subordinates is of no consequence. The boss or supervisor should just make the conditions of work favorable so that the worker can do his job effectively. Jobs have to be objective: that is, determined by task rather than by personality. To structure a job to a person is almost certain to result in the end in greater discrepancy between the demands of the job and the available talent.

The administrative philosophy of management is today practiced by some organizations, with the best example being the United States Government.[14] A manager, using the basic assumptions of Administrative Management System as a guide, tends to manage "by the book" and controls people by assuring that they will follow the rules.

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[14]U.S., Department of the Army, Army Command Policy and Procedure (Washington, D.C.: Government Printing Office, 1971).

Humanistic Management

Humanistic Management holds to the philosophy that individuals bring to their organizations: attitudes, values, and goals. Management must create an environment so that personnel can satisfy their needs and commit themselves to the goals of the organization at the same time. If management does not make allowances for the needs of personnel, this may result in disorganization and unhappy individuals. Douglas McGregor[15] promulgated the basic tenets of the Humanistic Management System:

1. The expenditure of physical and mental effort in work is as natural as play or rest. The average human being does not inherently dislike work. Depending upon controllable conditions, work may be a source of satisfaction (and will be voluntarily performed) or a source of punishment (and will be avoided if possible).

2. Man will exercise self-direction and self-control in the service of objectives to which he is committed.

3. Commitment to objectives is a function of rewards associated with their achievement. The most significant of such rewards, e.g., the satisfaction of ego and self-actualization needs, can be direct products of effort directed toward organizational objectives.

4. The average human being learns, under proper conditions, not only to accept but to seek responsibility.

5. The capacity to exercise a relatively high degree of imagination, ingenuity, and creativity in the solution of organizational problems is widely, not narrowly, distributed in the population.

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[15]Douglas McGregor, The Human Side of Enterprise (New York: McGraw-Hill Book Co., 1960).

6. The intellectual potentialities of the average human being are only partially utilized.

Model Theory

Several writers have explored and theorized about management systems and the development of models. These theorists have treated such topics as cybernetics, measurement, information retrieval, etc., with a great deal of specificity. In the review of the literature relative to model building, this writer made an effort to extrapolate those ideas and concepts which are relevant to the development of a model that will be useful for a high school academic department.

Integrating and linking together some significant points relative to model building was Karl Deutsch.[16] Deutsch said that a model should perform at least four distinct functions: (1) organizing, (2) heuristic, (3) predictive, and (4) mensurative.

Organizing function means the model is structured so that disconnected data show relationships, and these previously isolated parts form a pattern that shows similarities which were not perceived. Stating it another way: The organizing function of a model helps one to transfer learned habits from a familiar to an unfamiliar situation for effective action.

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[16]Karl W. Deutsch, "The Evaluation of Models," in Management Systems, ed. by Peter P. Schoderbek (New York: John Wiley and Sons, 1968), pp. 337-342.

Heuristic function helps one to discover new facts and new methods even though these novel facts and methods cannot be verified by the techniques which are available. Deutsch cautioned that the heuristic function of a model may be independent to a large extent from the organizing function, as well as from the predictive and mensurative function.

There are many predictive functions of a model; the most widely known and used one is verification by physical operation. Other predictive functions are: the simple yes-no prediction, qualitative predictions of similarity or matching, and quantitative predictions which possibly may yield answers to the questions of when and how much.

With respect to the mensurative function of a model, Deutsch raised these questions: (1) If the model is related to the things modeled by laws which are not clearly understood, the data it yields may serve as indicants; and (2) If the model is connected to the thing modeled by processes clearly understood, we may call the data obtained with its help a measure; and measures may range from simple rank orderings to ratio scales. Another aspect of evaluation is related to the performance of the model with respect to organizing, heuristic, prediction, and measurement.

Deutsch offered three aspects of a model which, to the mind of this writer, are crucial to success: (1) originality, (2) simplicity, and (3) realism. What, then, is

meant by each of these important factors? Originality means the improbability of the model. Originality is a dichotomy of probability or obvious triteness. The simplicity of a model is synonymous with the economy of means. Simplicity is tantamount to economy, and it was compared to efficiency in economics by Deutsch when he declared: "Efficiency in economics denotes the attainment of a given result with the greatest economy in the employment of those means which are shortest in supply at each particular time, place or situation."[17] The final yardstick for evaluating a model is realism. Realism means the degree of reliance that may be placed on the model that represents some nearness to physical reality.

R. J. Chambers[17] offered some design principles which are applicable to the development of a model for a high school academic department. The generalizations which follow are essential if one is to make decisions on the basis of the data obtained from his information system: (1) The language used by the model or the system must be identified by all members of the organization; (2) The system of model should be unquestionably reliable; that is, the users of the information will depend upon the system, rather than upon their own observations; (3) An abundance

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[17] Ibid., p. 339.

[18] R. J. Chambers, "The Role of Information in Decision Making," Management Technology, IV, 1 (1964).

of information can impair sound judgment if the influence on the information or particular situation is not clear to the users; (4) The information system is an abstracting system, and one is justified in reducing the flow of information to information that is relevant to action; (5) An information system must provide grounds for decisions as well as a feedback so that decisions may be reaffirmed or eliminated in favor of others; (6) An information system must keep formal records to protect against misinterpretation of past experiences; and (7) The information should be treated as a continuously developing instrument.

Dr. R. L. Martino[19] spoke of the functions of a total management system, and these functions have some relevancy for the development of a model for a high school academic department. The functions of a total management system are (1) to predict, (2) to compare the prediction with actual results, and (3) to produce the deviations between the predicted and the actual. An elucidation of the aforementioned functions of a total management system reveals that the predictive function to which Martino addressed himself includes the determination and consideration of alternatives. The method used in the process of considering alternatives is called simulation, a technique

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[19]R. L. Martino, "The Development and Installation of a Total Management System," in Systems Management, ed. by Peter P. Schoderbek (New York: John Wiley and Sons, 1968), pp. 121-122.

wherein the multiplicity of factors involved in a given situation are assembled into a model and the user of the model weighs each alternative and its effects. This predictive function is based on historical data as well as on what Martino termed simulation. Operationally, predictions are continually compared with actual results to determine deviations. The deviations are used to refine or revise the initial set of predictions and strategies. Then, the whole system reiterates, producing new predictions, and so on.

Some wholesome advice about decision making that is useful to any developer of a model for a high school academic department was presented by John F. Burlingame.[20] The concept of decentralization is the key, for it was Burlingame's idea that decision-making responsibility should be assigned at the lowest point in the organization where the needed skills and competence, on the one hand, and the needed information, on the other hand, can reasonably be brought together. The decentralization of decision making is thought of as creating an environment where the creative talents of responsible individuals are utilized. In this way individuals have responsibility, authority, and dignity, and an improved organization is the result.

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[20]John F. Burlingame, "Information Technology and Decentralization," Harvard Business Review, XXXIX (November-December, 1961), 121-126.

A further amplification of Burlingame's ideas indicates that there are two types of decision making one must notice: (1) those which concern measurable and objective physical phenomena, and (2) those which involve subjective human values and the assessment of situations in which information needs cannot be adequately anticipated or adequately filled.

In making decisions which involve human values, Burlingame explained the difference between a centralized and a decentralized organization. In a centralized organization, the decision structure tends to be one where human and social considerations are made at the top echelon; decisions which are made at the lower levels are routine and insensitive to human values. In a decentralized organization all types of decisions are made throughout the organization at all levels. The chief goal in a decentralized organization with respect to decision making is to relate all decisions to the purpose of the work.

Having relevancy to the development of a model for a high school academic department are the various ingredients involved in systems analysis which were presented by William G. Scott.[21] The ingredients are (1) the parts, (2) the interactions, (3) the processes, and (4) the goals of the system.

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[21]William G. Scott, "Organization Theory: An Overview and an Appraisal," Journal of the Academy of Management, IV, 1 (1961), 7-26.

There are five parts which are strategically important, according to Scott: (1) The individual, his personality, motives, and attitudes have to be considered because they condition the range of expectations he hopes to fulfill by participating in the system; (2) The formal organization is the interrelated pattern of jobs which make up the structure of a system; (3) The informal organization involves mutual modification of expectancies on the part of the individual as well as on the part of the group; (4) The status and role patterns have to do with the kinds of behavior modifications individuals must make because of the roles demanded of them; and (5) The physical environment of work has to be so structured that the psychological, social, and physiological characteristics of the people participating in the work environment are considered.

Interaction appears to be automatic among the aforementioned parts of a system; however, Scott cautioned that it is important to analyze the process by which the interaction is achieved. The process for achieving interaction has three linking activities: (1) communication, (2) balance, and (3) decision making. Communication takes many forms, i.e., formal-informal, vertical-horizontal, line-staff. Each part of the system communicates with the other, and communication takes place with the world outside the system. Balance means the various parts of the system are maintained in a harmoniously structured relationship to each

other. Discussing decision making, Scott made reference to the contributions made by March and Simon.[22] March and Simon promulgated two major classes of decisions which are (1) decisions to produce and (2) decisions to participate in the system. Decisions to produce are, for the most part, the results of interactions between individuals' attitudes and the demands of the organization. Decisions to participate reflect on the relationship between organizational rewards versus the demands made by the organization.

The goals of an organization are growth, stability, and interaction. These goals according to Scott are applicable to different forms of organizations at varying levels of complexity.

Some modeling considerations which are applicable to the development of a model for a high school academic department were presented by Joel M. Kibbee.[23] Simplicity is essential according to Kibbee, for it was his view that there is no a priori reason to assume that complicated questions can only be answered by using a complicated model. Flexibility for expansion is another crucial consideration for the development of a model. Using some basic time interval with respect to the questions under

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[22]James G. March and Herbert A. Simon, Organizations (New York: John Wiley and Sons, 1958).

[23]Joel M. Kibbee, "Management Control Simulation," in Management Systems, ed. by Peter P. Schoderbek (New York: John Wiley and Sons, 1968), pp. 353-354.

consideration is important, too. Simplicity, flexibility, and time intervals are modeling consideration Kibbee felt a developer of a model must take note of as he produces his model.

Promulgating the idea that a model can be an effective change agent, Robert Chin[24] constructed five questions he felt a model must answer:

1. Does the model account for the stability and continuity in the events studied at the same time that it accounts for changes in them? How do processes of change develop, given the interlocking factors in the situation that make for stability?

2. Where does the model locate the source of change? What place among these sources do the deliberate and conscious effort of the client-system and change-agent occupy?

3. What does the model assume about how goals and directions are determined? What or who sets the direction for movement of the processes of change?

4. Does the model provide the change agent with levers or handles for affecting the direction, tempo, and quality of these processes of change?

5. How does the model "place" the change-agent in the scheme of things? What is the shifting character of his relationship to the client-system, initially and at the termination of relationship, that affects his perceptions and actions? The question of relationship of change-agent to others needs to be part and parcel of the model since the existential relationship of the change-agent engaged in processes of planned change becomes "part of the problem" to be investigated.

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[24]Robert Chin, "The Utility of Systems Models and Developmental Models for Practitioners," in Planning Change, ed. by William G. Bennis, Kenneth D. Benne and Robert Chin (New York: Holt, Rinehart and Winston, Inc., 1961), pp. 201-214.

The application of the aforementioned questions to the development of models crystallizes some of the formation of ingredients for a change-agent model for changing, and in the view of this writer, these questions have some relevancy to the developer of a model for a high school academic department.

Advantages and Disadvantages of Models

Models, like most activities or situations of the real world, offer advantages as well as limitations. In searching the literature to ascertain what the advantages and disadvantages of models are, this writer found that many of the theorists presented similar concerns and gratifications about models. An effort is made, then, to summarize the expressions of satisfactions and dissatisfactions about models which, for the most part, are representative and inclusive.

Irving Bross[25] said models have various advantages, among which he listed their remarkable record of prediction in the past history of mankind, their use as a frame of reference on which to "hang the problem," their usefulness (even when a failure) for suggesting fruitful avenues of research, their simplification of the problem by employing only the significant attributes abstracted from the real

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[25]Irwin D. J. Bross, Design for Decision (New York: Macmillan Company, 1953), pp. 161-182.

world, their use of symbolic language for both manipulation of the model and for purposes of easy communication, and finally their economical approach to the costs of prediction.

Bross listed these disadvantages: the tendency toward oversimplification, the limitations of symbolic language used, the all-too-human tendency of model builders to reify their brain children, to look upon their models not as representatives of the real world but as being identified with it. He cautioned that when a model does not fit the real world, it is the model that must give way, and not the other way around.

Indicating that the purpose of his paper was to present concepts relevant to, and benefits to be gained from using, a "system" model and a "developmental" model in thinking about human events, Robert Chin[26] indicated these advantages of a model:

1. The model provides "mind-holds" to the practitioner in diagnosis.

2. A model lessens the danger of overlooking the indirect effects of a change of relationship.

3. The identification of and analysis of how tension operates in a system are by all odds the major utility of system analysis for practitioners of change.

4. A model can be used for a diagnosis of persons, groups, organizations and communities for the purposes of change.

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[26]Chin, pp. 201-214.

5. A model can provide directional focus for analysis and action and a temporal frame of reference.

Chin pointed out that the behavioral scientist by constructing a simplified model can analyze his thoughts and concepts, and see in turn where the congruities and discrepancies occur between these and actual events. In this way, the behavioral scientist becomes at once the observer, analyzer, and modifier of the system of concepts that he is using.

In the article "Systems Can Too Be Practical," Allan Harvey[27] spoke of the things the systems approach accomplishes. First, it frees the corporation from the perils of its organizational straitjacket. Second, the systems approach makes it possible for management to make decisions with full knowledge of their impact on total costs. Third, the systems approach makes it possible to put to profitable use new techniques and new technology. Finally, the systems approach puts a firm foundation under the corporate information and control procedures.

Harvey felt that the proponents of the systems approach have led management astray by doing these things: (1) exaggerating its newness, (2) clothing it in unintelligible jargon and elaborate mathematics, and (3) permitting

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[27]Allan Harvey, "Systems Can Too Be Practical," in Management Systems, ed. by Peter P. Schoderbek (New York: Joyn Wiley and Sons, 1968), pp. 154-162.

the impression to persist that systems are only for giant complexes.

One of the strongest statements for model building was offered by Stafford Beer when he declared:

> I have often tentatively proposed that no operational research job has ever been done without the use of a model, and since this has never provoked a counter example I will now risk the statement that this is indeed a characteristic of the work. Should anyone seek to deny this, may I warn him in advance of my defense. He says of a given job: there was no model. I reply that a model of the situation must have existed in his brain before he could do the thinking required to solve the problem. A model is no more than a description into which the real situation can be mapped. If the mapping can be done inside the skull, so much the better. But if the situation is too complicated, then the brain cannot hold the structure and its owner must go on to paper with an elaborate scheme. But the idea is the same, I contend.[28]

Extolling and defining the virtues of the systems approach, its proponents have also indicated some concerns about its limitations; however, a judicious handling of the positive concepts and ideas they seem to be saying will obviate or reduce the limitations of a model.

Management Team Concept

A great deal of work and research have been done to establish the validity of the systems point of view and to promote its use, particularly in industry. The evidence drawn from successful experiences of some companies has

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[28]Stafford Beer, "What Has Cybernetics to Do With Operational Research?" Operational Research Quarterly (March, 1959).

served to stimulate educators to take a look at how the systems approach may be useful in the management of schools. As a result, the gap is narrowing between what educators have learned about complex systems and the use to which they are applying this knowledge. The ensuing review of literature about the management team concept is an affirmation that educators are proposing elements of the systems approach in an attempt to deal with problems encountered in school systems.

Conwell A. Anderson[29] viewed true leadership as involving total management in decision making, not making edicts from the top down. This is the concept of decentralization that is a key facet of the systems approach. An individual is given an opportunity to make decisions at the level where he is responsible for action and he, in turn, is accountable for those decisions. It is the belief of the advocates of the decentralization of decision-making philosophy that an individual can identify better with an organization and he is more responsive to it when he is trusted to make decisions at his level of competency and responsibility.

Recognizing that the systems approach is dealing with human beings, a consideration some forget, were

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[29]Conwell A. Anderson, ed., Administrative Team Leadership in Concept and Practice (Athens, Georgia: Institute of Higher Education, University of Georgia, 1966).

Robert R. Black and June S. Mouton.[30] These writers contended that concerns for people as well as concerns for production are the main ingredients of effective management. Blake and Mouton spoke of the following relationships in management: goals, boss-subordinate interactions, conflict, creativity, commitment, management development, and personal behavior.

Focusing on how the central administrators in a school system are developed into a team were Edwin A. Fensch and Robert D. Wilson.[31] These authors discussed relationships and practices which are necessary for building the superintendency team. The roles of the leaders charged with operating the offices of instruction, certificated personnel, pupil personnel services, and business affairs were outlined. Significant concepts which permeated the thoughts of the writers relative to the roles of leaders in the various jobs of a school system are human relations skills and knowledge of the job where they have leadership responsibility.

Rensis Likert[32] described four types of management systems: (1) explorative authoritative, (2) benevolent

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[30]Robert R. Blake and June S. Mouton, The Managerial Grid (Houston: Gulf Publishing Co., 1964).

[31]Edwin A. Fensch and Robert D. Wilson, The Superintendency Team (Columbus, Ohio: Charles E. Merrill Books, 1964).

[32]Rensis Likert, New Patterns of Management (New York: McGraw-Hill Book Co., 1961).

authoritative, (3) consultative, and (4) participative group. It was the belief of this author that the participative group is more effective, for if individuals have some input their attitudes toward their jobs are better. Good communication at all levels is essential for the participative style of management to be effective. Likert observed that it is difficult for an organization to move toward a participative group style of management if the top echelon group operates in an authoritative manner. Administrators, in his view, should be involved in decisions that directly affect their responsibility.

William W. Savage[33] talked about the understandings and relationships which are required of school officials. The emphasis was placed on interpersonal and group relations of the administrators, teachers, students, parents, and community members who are interested in education. Savage said some individuals lack a basic sensitivity to other human beings. These individuals, in his view, are well-intentioned, pleasant people, but they are oblivious to the reactions and much of the behaviors of others with whom they have contact. They seem unaware of the evident attitudes and behavior of their colleagues, superiors, or subordinates. They may be oblivious to the obvious boredom or antagonism of the audiences to whom they speak. In

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[33]William W. Savage, Interpersonal and Group Relations in Educational Administration (Atlanta: Scott, Foresman and Company, 1968).

interviews they learn nothing from the behavior of individuals with whom they talk, and as teachers in the classroom they are unaware of pupil boredom, frustration, or enthusiasm. The essential point that Savage made is that these insensitive people can be assisted to understand their behavior and that of others by developing skills in interpersonal and group relations.

Lester W. Anderson[34] raised questions about the relevant issues and problems inherent in the management team concept. On the whole, management team revolves around two key questions: (1) Do all parties really want a working relationship based on involvement in policy formation? and (2) Is the organizational structure designed to keep communications open in the decision-making process? Amplifying the question of involvement, Anderson said that the management team concept requires a commitment to the viewpoint of involving people in the process of policy formation, especially when the policies are so directly related to their duties, especially as is the case in the relationship of collective bargaining. School policy is and should remain as the exclusive prerogative of the board of education. It is essential, in Mr. Anderson's view, that legislative responsibility be retained by the board; however, it is equally important that all administrators have the

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[34]Lester W. Anderson, "Management Team Concept," Michigan Journal of Secondary Education, X, 3 (1969).

opportunity to influence legislative decisions. Participation in policy formation should be considered a right, not a concession to be granted. Organizing a structure for better communication is the other alternative that is essential for using the management team concept. Anderson suggested a structure that will have representative grouping; the main goal is to keep the channels of communication open from top to bottom.

Believing that the management team concept would increase the effectiveness and contribution of every administrator, Frank Heselton presented the concept of management team from a board member's viewpoint when he stated:

> To me, from the board member's viewpoint, "Management Team Concept" means genuine delegation of managerial responsibilities to whatever administrative level is appropriate to best directly carry out those responsibilities, whether they be purchasing, transportation, public relations, curriculum, budget preparation, educational supervision, or you name it--there are more than enough real responsibilities for all. In the reverse direction, "Management Team Concept" means to me a system for obtaining the maximum professional contribution from every administrator toward continually improving education and better management, and thus encouraging every administrator to enable himself to offer more and more. These are efficiency, these are good business, these bring improvements in education, these cultivate greater public understanding and support, these lead to closer working relations with the teaching staff and all other employees.[35]

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[35]Frank Heselton, "Management Team Concept From Board Member's Viewpoint," Michigan School Board Journal, XV, 11 (1969), 6.

Robert W. Walker and Eugene C. Hammel[36] were concerned about good management because it was their belief that such pressures as technology, finance, and negotiations are polarizing our public schools today. It was the belief of these writers that the management team concept should encompass not only involvement, but accountability. The starting points for accountability being woven into the management team concept rest with the school board. First, according to the writers, the board should provide their superintendent with broad immediate and long-range objectives for the school district. These objectives should fall within the framework of the school's written policies. These objectives of a school district should be developed and agreed upon by the board and the superintendent as being realistic and tenable. These objectives should be spelled out in such a fashion that they can serve as a formalized guide providing everyone involved with a sense of direction and a statement of expectations.

Defining and discussing the practical value of using the management team concept, Robert Walker[37] suggested ways of implementing the concept. By explanation, Walker said that the management team concept means the involvement,

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[36]Robert W. Walker and Eugene C. Hammel, "Management by Design Using the Team Approach," Michigan School Board Journal, XVI, 12 (1969).

[37]Robert Walker, "The Management Team Concept," Michigan School Board Journal, XV, 11 (1969).

directly or by representation, of all levels of administrators in the decision-making process before the fact. This kind of involvement is essential in building a model for the management team concept. The practical value of using the management team concept is that it gives everyone an opportunity to state and defend his views before a decision is reached. Moreover, according to Walker, the management team concept should provide for two-way communication between administrators and staff in order that positive benefits and advantages derived from this kind of participation may be extended to all.

A necessary sequel to the importance of using the management team concept is how it is to be put into practice. In this regard, Walker suggested seven possibilities:

1. Principals should be included on the school board's team in the area of teacher negotiations.
2. Principals should be given a major role in the administration of the contract.
3. All levels of administration should be involved in the budgeting process.
4. Develop an administrative cabinet and get input from each group of administrators.
5. Opportunity should be provided so that everyone can meet on a regular basis.
6. Organizing a local association of administrators could be a solidifying force that might cement relationships among those on the management team.
7. Steps should be taken to involve all administrators in decisions which relate to salaries and working conditions.

The writer notes in this review of literature that educators, particularly in the state of Michigan, are taking cognizance of management science techniques with great emphasis at the administrative level. Is it possible that these techniques might also be applicable to the school public at large? The following words of Robert Walker provide a satisfactory answer to using techniques of management science at the administrative level as well as in the school public:

> One would indeed be naive not to recognize that some problems continue to occur in administrative relationships if prompted only by personality clashes and efforts to categorize functions. There will, no doubt, be problems and concerns in attempting to make this concept functional. Some give and take must be anticipated. Some disappointment will be experienced and perhaps some out and out failure. Some people will expect too much too soon and others will not be willing to give the idea a fair chance. Everyone will have to learn their new roles and altered roles involving responsibilities and accountability. Establishing and maintaining effective management methodology is both challenging and demanding. It involves a real sense of dedication and purposefulness. These are the ingredients which will insure success in the management team endeavor if we want to make the concept work.[38]

Advantages and Limitations of Performance Objectives

The systems approach program is evaluated on student learning outcomes, not on course curriculum offerings, teacher-pupil ratios, the number of books in the library, the expenditures allocated for each student, education of

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[38]Walker, p. 9.

teachers, and the multiplicity of input measures which characterize the criteria for measuring success in so many school districts. The emphasis in the systems approach is on outputs. How well can students perform is the yardstick for measuring the effectiveness of a program in the systems approach program; thus clear statements of the objectives is a key requisite of this program.

Inasmuch as objectives are a major facet of the systems approach, the ensuing discussion will present some of the advantages and limitations of writing behavioral objectives as found in the literature.

Limitations of Performance Objectives

J. Myron Atkin[39] catalogued several reservations he had about the use of behaviorally stated objectives, which may be summarized as follows:

1. The fundamental problem lies in the easy assumption that we can either know or can readily identify the educational objectives for which we strive.

2. Certain types of innovations, highly desirable ones, are hampered and frustrated by early demands for behavioral statements of objectives.

3. Riveting the teacher's attention to a few behavioral goals provides him with blinders that may limit his range. Directing him to hundreds of goals leads to confusing, mechanical pedagogic style and loss of spontaneity.

4. The behavioral analyst seems to assume that for an objective to be worthwhile, we must have methods

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[39]Myron J. Atkin, "Behavioral Objectives in Curriculum Design," The Science Teacher, XXXV (May, 1968), 27-30.

of observing progress. But worthwhile goals come first, not our methods for assessing progress toward these goals.

Martin Haberman[40] spoke of benefits and limitations of behavioral objectives. In this section only the limitations are listed below.

1. The most powerful element in the process of schooling is social interaction, not content.
2. The interrelations of content are internal as well as external.
3. Skills become overemphasized--generalizations are undervalued.
4. All content does not fit the behavioral approach.
5. Experts become more critical than teachers and children in the decision-making process.

Arthur Combs deplored "teaching what one can test," as one of the limitations implied by using behavioral objectives. He stated his concerns about behavioral objectives this way:

> The behavioral objectives approach is like that. It does, indeed, have limited value and often works quite effectively when applied to the acquisition of precisely defined skills. It thus has an important place in a system of accountability. Unfortunately, behavioral objectives also have a logical, tangible quality that they are likely to create illusions of accuracy and efficiency far beyond the assistance they can actually deliver. As the sole or primary means for assessing educational outcomes, they leave very much to be desired.[41]

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[40]Martin Haberman, "Behavioral Objectives: Bandwagon or Breakthrough?" Journal of Teacher Education, XIX (Spring, 1968), 91-92.

[41]Arthur Combs, Educational Accountability Beyond Behavioral Objectives (Association for Supervision and Curriculum Development, 1972), pp. 1-2.

Those limitations of behavioral objectives which Combs distinctly stated are listed below:

I. The behavioral objectives approach is a closed system of thinking.

   A. It demands that ends be stated in advance.

   B. The closed system of thinking also leads directly to a "great man" philosophy for education; someone must know where the people should go so we can set up machinery to get them there!

   C. Teachers must be expert diagnosticians and psychologists capable of dealing with literally thousands of contingencies.

   D. A closed system of thinking makes the teacher responsible for whatever students do.

II. The specificity required when writing behavioral objectives narrows the aims and purposes of teaching to even a smaller and smaller unit capable of simple measurement and so contributes further to the terrible dehumanization already rife throughout our educational system.

III. Preoccupation with precise behavioral objectives also makes classroom practices irrelevant to the needs of students.

IV. One of the saddest aspects of the current press for behavioral objectives is the contribution it makes to the further demoralization of teachers.

Advantages of Behavioral Objectives

Martin Haberman[42] cited these benefits of behavioral objectives:

1. Broad content is broken into manageable, meaningful pieces.

2. Organizing content into sequence and hierarchies is simplified.

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[42] Haberman, p. 92.

3. Evaluation is simplified.

4. Teacher training is facilitated.

5. Selection of materials is clarified.

6. Research and planning become part of the mainstream of the educative process.

Robert F. Mager[43] presented his thoughts on the writing of behavioral objectives as follows:

1. When clearly defined goals are lacking, it is impossible to evaluate a course or program efficiently, and there is no sound basis for selecting appropriate materials, content, or instructional methods.

2. An instructor will function in a fog of his own making until he knows just what he wants his students to be able to do at the end of instruction.

3. Another important reason for stating objectives sharply relates to the evaluation of the degree to which the learner is able to perform in the manner desired.

4. An additional advantage of clearly defined objectives is that the student is provided the means to evaluate his own progress at any place along the route of instruction and is able to organize his efforts into relevant activities.

Robert E. Boston, assistant superintendent for instruction at Bloomfield Hills School District, Bloomfield Hills, Michigan, declared:

> Objectives are constructed for the purpose of predetermining what changes are to occur in the system. It is important to develop factors of accountability into a system. Accountability is the measure of dollars spent as linked to results. Written objectives criteria whereby management, prior to the preparation

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[43]Robert O. Mager, Preparing Instructional Objectives (Palo Alto, California: Flaron Publishers, 1962), pp. 3-4.

of the annual budget, assesses current data from operating programs.[44]

Robert O. Riggs,[45] while writing specifically for higher education, had some remarks about management by objectives that can be applied to all levels of instruction. He saw management by objectives providing the following benefits:

1. A means of specifically determining the areas of responsibility and control span of each member of the organization, including areas of shared or joint responsibility.

2. A measurement of the true performance of personnel as compared with previously identified and stated criteria.

3. A contribution to more effective communications among various members of the organization through requirements for personal discussions of individual goals and means by which they may be accomplished.

4. An elimination of the need for changes in personality and refutation of personality as a criterion because management by objectives focuses upon the accomplishment of specific goals.

5. An open problem-solving climate which stimulates an increased sense of participation in the accomplishment of specific goals.

The writers who were supportive of using behavioral objectives declared that clearly defined goals are necessary

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[44]Robert E. Boston, "Management by Objectives: A Management System for Education," Educational Technology, XII (May, 1972), 49.

[45]Robert O. Riggs, "Management by Objectives: Its Utilization in the Management of Administrative Performance," Contemporary Education, XLIII (January, 1972), 129-130.

to evaluate the efficiency of a program in terms of responsibility and accountability, and this kind of planning is an inescapable part of the systems approach. Reduction or obviation of criticism relative to using behavioral objectives will occur, these writers seem to be saying, if judicious attention is given to two parts of the systems approach: involvement of the school public and open channels of communication among all levels of the school public.

The Department Head in Large High Schools

In recent years many questions have been raised about the effectiveness and usefulness of department heads in large high schools. Richard L. Knudson stated, "I am convinced that a group of English teachers can make a department work better without a department chairman."[46] It was his belief that the chairperson is no longer necessary to supervise teachers, for teachers come well-qualified. He also contended that a good secretary could do many of the things which chairpersons are responsible for doing, e.g., ordering supplies and typing. Knudson had hope for effective leadership in an academic department when it has a chairperson who is extremely democratic and involves everyone in decision making.

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[46]Richard L. Knudson, "Help Stamp Out Department Chairmen," English Journal, LX (March, 1971).

Donald C. Manlove and Robert Buser[47] said that the position of department head in the organization of the larger secondary school today is somewhat of an enigma. On the one hand, school administrators have difficulty operating with department heads; however, on the other hand, most of them will not operate without them. The following guidelines were offered by the writers relative to solving the puzzle with respect to the need for department heads in large high schools.

1. Perhaps the most important ingredient for effective supervision and administration through the department leadership is a common understanding of the functions, responsibilities, by everyone involved--the superintendent, the principal, the curriculum coordinator, the system-wide supervisors, the department heads, and the teachers.

2. A sound selection system is needed, one which is compatible and consistent with the functions assigned department heads.

3. The term of appointment should be one year, with the understanding that the head would be reappointed providing he demonstrates capable leadership.

4. Compensation for the department head should be based on his professional qualification, professional experience, and job performance. Released time from classroom teaching assignments should be a condition of appointment rather than compensation for the assignment.

5. The amount of time that department heads should be released from classroom teaching assignments is directly proportional to the number of teachers in the department and the responsibilities assigned the department head. Inadequate time limits the opportunity to visit classes, confer with teachers, conduct demonstration lessons, and administer departmental affairs.

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[47]Donald Manlove and Robert Buser, "The Department Head: Myth and Reality," Education Digest, XXXII (February, 1967), 38-41.

6. The effectiveness of department heads in implementing the philosophy of the school should be evaluated in some regular and systematic manner. Evaluation should be continuous, and it should be made by those to whom the heads are immediately responsible.

Gladys Veidemanis made this observation about a department head's role:

> Our most important task is to open and articulate the lines of communication between all levels, first as fellow professionals, and, more important, as fellow human beings who need one another for support, stimulation, and--simple as it may sound--basic happiness in our work.[48]

Based on a study which had as its purpose to determine the status of the department chairpersonship by surveying the chairpersons of large departments in high schools enrolling 500 pupils or more and accredited by the North Central Association, William G. Altimari, Jr.,[49] made the following recommendations:

1. Regional accrediting associations should encourage and up-grade the utilization of the department chairperson in secondary schools enrolling 500 pupils or more.

2. Qualifications for the position of department chairperson should include:

   a. Leadership ability.

   b. The Master's degree earned in his subject-matter field.

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[48]Gladys Veidemanis, "Frankly Speaking--A Candid View of the Department Chairman's Role," English Journal, LVI (September, 1967), 832.

[49]William G. Altimari, Jr., "The Department Chairman in Large High Schools of North Central Association," North Central Association Quarterly, XLII (Spring, 1968), 310-311.

c. Six years' teaching experience at the secondary level in the subject-matter field of the department.

d. A desire to update and strengthen his knowledge in the specific subject-matter field of his department, in general education, in curriculum development within his and related subject fields, in instructional methods, and in supervisory techniques.

3. The method of selecting the department chairperson should be by appointment and the principal should make the appointment.

4. The department chairperson's role and status should be clarified in written form.

5. The role of the department chairperson should be designed to facilitate and improve instruction.

6. In order for the department chairperson to perform his role with optimum utilization of his training, experience, and ability, he should be given the opportunity to delegate clerical duties to student assistants, secretaries, and/or paraprofessionals.

7. The department chairperson should have an office large enough to accommodate conferences with small numbers of teachers.

8. The department chairperson's responsibility for departmental leadership in the improvement of the curriculum and instruction in his department should be compensated for through financial remuneration beyond the regular teacher's annual salary to a greater extent than found in this study.

9. School districts should alleviate the inadequacy of the department chairperson's academic preparation by making in-service training available.

10. The department chairperson should have an indefinite term of office terminated when the chairperson's effectiveness in exerting education leadership in his department is less than it should be.

Reho F. Thorum,[50] in a study conducted to try to determine if there was any significant trend away from the use of department heads in large senior high schools, offered these recommendations:

1. High schools with a student enrollment of 1,000 or more cannot maintain their vitality or provide for curriculum change unless a sub-structure, such as departments, is established within the school.

2. Selection of a department head should be the responsibility of the individual school.

3. The department head's effectiveness is in direct relation to the amount of time in which he is allowed to perform his assigned duties. Financial remuneration has little influence on the ability of the department head to perform the function of his position.

4. The term of the office of a department head should be dependent on a yearly renewal and evaluation.

The department chairperson is an important individual in a systems model that is developed for a high school academic department. The personal qualities and academic preparation that are necessary for effective leadership have been enumerated by the writers in this section of the review of literature.

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[50] Reho F. Thorum, "The Department Head in the Large Senior High School," Clearing House, XLIII (January, 1969).

CHAPTER III

ASSUMPTIONS

Making assumptions about what management science and/or a systems model can provide the users of these approaches in a high school academic department is a challenging task. When one makes assumptions he has to be careful that the literature and/or his experiences provide evidence to support the contentions. Ever mindful of the aforementioned thoughts, this writer will attempt to develop and validate assumptions about management science and a systems model for a high school academic department which will have some relevancy to the following functions: programs, finance, students, facilities, community, and personnel.

A key assumption is that a systems model has application for chairpersons and their academic departments in high schools where students have diverse needs, interests, and achievement levels. It is the belief of some educators that it is the responsibility of the academic departments and their chairpersons to assist students to achieve better in the discipline for which they are responsible. How can a systems model assist chairpersons and their departments in improving the achievement of students? Providing an overview of how a systems model can assist the academic department

and the chairperson were George Hansbury and Dorothy Huenecke when they stated that instructional development involves:

1. Identification and analysis of instructional needs
2. Formulation of specific objectives
3. Development and testing of viable alternatives
4. Revision and retesting of alternatives
5. Evaluation of the system as well as of individual learner achievement.[51]

Using the concepts presented by Stansbury and Huenecke as a framework for the specific assumptions that will be developed in this chapter, this writer wishes to echo many management science theorists by recalling a remark by Lawrence Appley: "Management makes things happen--it gets things done through other people."[52] The next assumption, then, is that a systems model provides for input from all segments of the school public. Many writers in the field of education tell us that if input is received from all segments of the school public, the chances for achieving the goals are immeasurably improved. Joseph L. Massie stated it this way:

> Thus participation is one approach to the solution of problems created by authority in organizations. Although different kinds of participation might have different kinds of effect, participation generally alleviates many of the problems created by hierarchy. In general,

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[51]George W. Stansbury and Dorothy Huenecke, "Curriculum Management and Instructional Development: A Cooperative Venture," Educational Leadership, XXX, 4 (1973), 318.

[52]Lawrence A. Appley, Values in Management (United States: American Management Association, 1969), p. 139.

> organizational members want to exercise and control and find in participation an important source of gratification. They may derive satisfaction because of their need for self-determination, independence or power. Participation may also being certain pragmatic rewards. A person who participates in decisions can have a greater impact over his self-determination and can better watch out for his own self-interests depending upon how far the participation scheme goes in giving power to members. Participant decisions, more than hierarchical decisions, are likely to take into account the needs and the interests of all parties so that control is less likely to seem arbitrary and threatening.[53]

Joseph Massie seems to be suggesting that members of an organization should have some input relative to decisions which affect them. Applying this concept to a systems model for a high school academic department, the school public (parents, students, community people, personnel) would participate in decisions which involve problem identification, goal establishment, selection of alternatives, and evaluation methods--the concepts presented by George Stansbury and Dorothy Huenecke. This cooperative venture of involving the school public in all decisions is operative throughout all aspects of a systems model.

A systems model makes provision for problem identification. "The first step in the instructional development is critical, for it involves identification of the problem. It focuses attention upon the status quo or 'what is' while allowing for a description of the ideal or 'what ought to

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[53]Joseph L. Massie, Essentials of Management (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1971), p. 148.

be.'"[54] Analysis of the problem, to the mind of this writer, involves marshalling forth all the data one can get in order to identify the discordant elements. Two suggestions permeate the thoughts of this writer with respect to ways of securing data: (1) knowledge from theory and research and (2) knowledge from the experiences of the school public. An amplification of the procedure of procuring data from theory and research indicates that the members of an organization as it relates to a high school academic department would have to review the research that is presented in professional periodicals, read books that are available in the subject-interest areas, and they should review dissertations which are appropriate to their concerns. Knwoledge from the experiences of the school public calls attention to participation, for this involves getting input from parents, students, community people, and personnel. Once the data are obtained from these sources, an analysis of tne data is made under the guidance and direction of the chairperson. One of the purposes of the analysis is to separate the causes of a problem from the problem itself. After this is done, the chairperson assists in writing a problem statement that reflects the concerns of the school public.

Following the writing of a problem statement, the systems model makes provisions for the development of a goal statement and the writing of specific performance objectives.

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[54]Stansbury, p. 319.

Making some cogent remarks relative to management science and the writing of objectives was Lawrence Appley when he declared:

> If individual or institutional life is to have value, there has to be an objective--a purpose acceptable to society; accountability to attain that objective. That goes for a person, a theologian, an educator, a government administrator, an editor, a labor leader, an intellectual, an idealist, a manager, or anyone who wishes to be a "pro"--a superior and respected performer. Responsible people cannot be free of responsibility. There has to be an objective in order that the nature of responsibility can be clear to all.[55]

The school public as a form of organizational management, the proponents of management science techniques would insist, must cooperatively establish these objectives. "The cardinal point in management is the objective it sets out to achieve. An organization is not needed unless the objectives can be attained better by a group than by one person alone. The group must be willing to work together for a common purpose."[56]

Expressing similar concerns about getting individuals involved ab initio in setting goals and objectives was David A. Emery, who said:

> . . . Most people are more ready to support the goals they've had a hand in setting. This applies to individuals working in groups just as much as to a person working alone. In fact, the consequences of prolonged subordination to unsupported goals are particularly serious where groups are concerned. Reactions range

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[55]Appley, p. 481.

[56]Mary Cushing Niles, The Essence of Management (New York: Harper and Brothers Publishers, 1958), p. 26.

> from just going through the motions, up to outright rebellion including attacks upon the leader. On the other hand, when people in a group see themselves as sharing common goals they believe in, emotional involvement and work productivity can reach levels of effort far beyond a simple summation of their individual capabilities. While this kind of productivity can exist in support of dictated goals, it is much more likely to develop on a sustained basis when group members have had a major hand in setting the goals, so they regard the goals as their own.[57]

Involving the school public in the goal setting process is an essential feature of management science and the systems model, for it is through this kinds of participatory action that, according to some management theorists, commitment and better production are received from those individuals who have to work to accomplish the goals.

Planning programs or developing strategies for achieving the objectives is the next step; therefore, a systems model makes provisions for evaluating alternatives. Theorists of management science and systems models have presented a multiplicity of ways for evaluating alternatives. Among the activities they suggest are decision analysis, decision tables, decision trees, and procedures for classifying, quantifying, and comparing alternatives to name a few. However, this writer finds that David Emery's detailed discussion of the decision analysis approach for

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[57] David A. Emery, The Compleat Manager (New York: McGraw-Hill Book Co., 1970), pp. 46-47.

[58] Ibid., p. 88.

evaluating alternatives is comprehensive and representative, and a summary of the salient points he made follows.

The decision analysis approach demands that one applies the management processes of defining, classifying, and prioritizing goals prior to developing alternative means of achieving them. The decision analysis procedure has the following advantages: (1) It commits the decision maker to a set of goals long before he knows what alternatives he will be evaluating. This reduces bias; (2) It weeds out unfeasible alternatives early in the evaluative process. Any alternative that fails to satisfy the required goal is rejected. This is a time saver, for it permits one to give more attention to alternatives which fall within the range of possibilities with respect to accomplishing goals; and (3) It includes a systematic check for possible negative consequences of favored alternatives. This provides a balance between omitted goals, on the one hand, and looking at only the bright side of alternatives, on the other hand. Decision analysis, according to Emery, is time consuming; however, it is adaptable to a wide range of choices, and can utilize information that is quantitatively precise or judgmental.

The literature of management science provides a plethora of other ideas one must consider when selecting alternatives for action to achieve objectives. Chief among these is the organizing of physical, financial, and human

resources for action. To state it another way around, with equal validity: When considering alternatives one must determing (1) How much does it cost to institute a program? Are the finances available? Will the results justify the expenditures? (2) What materials or supplies are needed? Can they be made available without too much difficulty? (3) What personnel is needed to get the program under way? Do the individuals have the necessary skills and competencies to operate the program desired? (5) What relationship does the program have to students? Does the program offer hope for better student achievement? Will the program motivate and/or sustain the interest of students? The aforementioned questions are a sampling of the kinds of concerns that permeate the literature relative to the evaluation of alternatives.

Evaluating alternatives or any other aspect of a systems model or evaluating the total model is essential according to the concepts promulgated by management science theorists. For the most part, these theorists tell us that evaluation takes place at all steps in a systems model; therefore, it is assumed that a systems model makes provisions for the evaluation of all its entities. One has only to recall the concepts presented by Karl Deutsch when he stated that the mensurative function of a model is necessary.[59]

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[59]Deutsch, pp. 337-342.

Moreover, he said that all aspects of the model--organizational, heuristic, and predictive functions--must be measured. While one may, in some instances, think of evaluation as being a separate entity, the management science theorist will tell us it may be but, at the same time, some kind of evaluation is necessary at each stage of a model.

Evaluation, then, is not inseparable from the assumption that a systems model makes provision for reiteration. Some writers tie these concepts together. Henry H. Albers put it this way: "Control or feedback information indicates planning inadequacies and variations from plans. It provides a basis for adjustments in organizational behavior and proper adaptation to environmental changes."[60] This reiterative process is essential according to many writers of management science, for as one evaluates any part of a systems model he would be able to revise, adjust, or reject any part of a program based on evaluative findings. It is essential, then, in the fiew of some management theorists, that a systems model reiterates; and thus the necessary adjustments should be made. This is highly significant for a high school academic department, for management science theorists tell us that reiteration over the long haul saves money and makes for better production. Writers on educational problems list

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[60]Henry H. Albers, Principles of Management: A Modern Approach (New York: John Wiley and Sons, Inc., 1969), pp. 91-92.

getting more finance and assisting students to achieve better as top priority goals.

This writer has attempted in this chapter to validate these assumptions: A systems model makes provisions (1) for an academic department under the leadership and guidance of a chairperson to have a systematic plan for helping students to achieve better; (2) for getting input from all segments of the school public; (3) for identifying problems and gaining consensus; (4) for the development of a goal statement and the writing of specific performance objectives; (5) for selecting alternative programs; (6) for evaluating all aspects of a model; and (7) for reiteration and adjustment for better results.

CHAPTER IV

HYPOTHESES AND MODEL

In this chapter the writer is prepared to develop some hypotheses from the assumptions made relative to the development of a systems model for a high school academic department. The assumptions are: A systems model makes provisions (1) for providing an academic department under the leadership and guidance of a chairperson with a systematic plan for helping students to achieve better; (2) for getting input from all segments of the school public; (3) for identifying problems and gaining consensus; (4) for developing a goal statement and the writing of specific performance objectives; (5) for selecting alternative programs; (6) for evaluating all aspects of a model; and (7) for reiterating and adjusting for better results.

Having validated the aforementioned assumptions in Chapter III, the writer hypothesizes that <u>if a systems model is used by a high school academic department, students will achieve better</u>. Among the entities of a model which lend credence to this statement is the involvement of the total school public. Getting input from students, teachers, parents, administrators, and other interested persons with

respect to defining what the problems are which relate to student achievement is one of the outstanding features of the systems model. This is a way of controlling the information flow; namely, getting the concerns of all involved in the decision-making process.

The writing of a goal statement and specific performance objectives supports the hypothesis that a systems model will help students achieve better. By establishing a goal statement the school public knows the overall aim of the program. The establishment of specific performance objectives lets the school public know what is being done by the performer/student to improve his achievement. In addition, the specific performance objectives let the school public know what facilities or materials are being used by the performer/student, how long it will take a performer/student to work on a task, and what degree of success the performer/student has achieved in terms of accomplishing the objectives.

The selection of an alternative program on a priority basis is another entity of a systems model that supports the hypothesis that students will achieve better when a systems model is used. There are some essential questions which should be answered positively when one selects a particular program to implement from several possibilities. These questions involve such matters as adequate finances, facilities, and materials. They also

involve the competencies of the staff and the number of students that will benefit from the program that is selected.

This writer contends that evaluation and reiteration will help students to achieve better, for these procedures let those persons who are directly responsible for helping the students improve know what changes, adjustments, or other actions might be necessary for optimum achievement by students.

Along with helping students to achieve better, this writer extends the assumptions to include these hypotheses: (1) If a systems model is developed, the personnel directly responsible for the improvement of student achievement will be provided with an accountability model; and (2) If a systems model is developed, the academic department will make optimum use of (a) facilities, (b) expenditures, and (c) personnel.

Responsible people cannot escape being accountable. Accordingly, the systems model makes provision for using the resources of the total school public in decision-making; therefore, the persons directly involved will not have to shoulder all the criticisms for failure, nor can these persons claim all the glories for success. Moreover, the systems model lets the total school public know what everybody is doing, and it lets the school public know what failure or success everyone is experiencing; thus providing an accountability model.

Making the best use of facilities is a difficult task for the administrators of the program. The systems model makes provisions for examining the facilities and using them for maximum effectiveness. The allocated resources are examined in terms of getting the best educational returns for the money spent in a systems model, and teachers are used where their skills and interests would do the most good with respect to helping students achieve.

The model that follows (Figure 1) supports the three hypotheses this writer has developed: A systems model if used will (1) help students achieve better, (2) provide an accountability model for the school public, and (3) will help the school public make the best use of (a) facilities, (b) expenditures, and (c) personnel.

A step-by-step procedure on how to use the parts of the model is presented; namely, identifying problems, writing of a goal statement, writing specific performance objectives, selecting strategies, taking action, evaluating, and reiterating.

Problem Identification

Getting agreement among the many facets of the school public regarding a priority of educational problems, or a priority of opportunities to exploit is at best a difficult job, both conceptually and operationally. The chief difficulty lies in obtaining consensus on what constitutes a

A SYSTEMS MODEL FOR A HIGH SCHOOL ACADEMIC DEPARTMENT

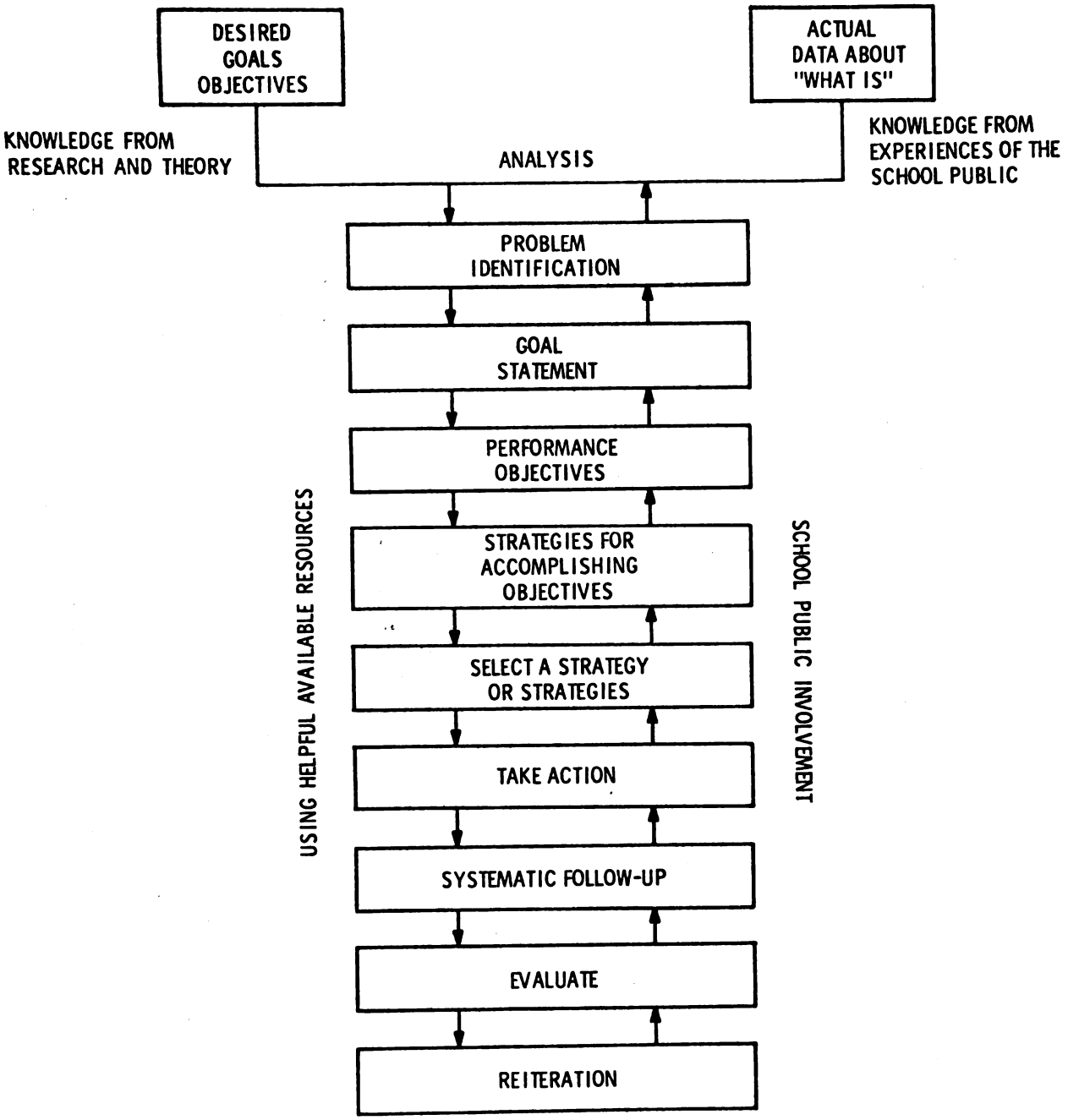


FIGURE 1.

problem since problems are value-laden. To state it another way with equal validity: The value judgment held by the perceiver determines whether a problem exists. A problem is defined as discrepancy between the actual situation and the desired situation. Once the school public decides that a discrepancy exists, it needs to in some systematic manner determine the importance of the problem.

The ensuing series of steps offers a means for identifying problem areas. Any segment of the school public (staff, parents, students, administrators) gathered in a meeting could use the following procedure:

Step 1: Divide the concerned people into groups of five to seven.

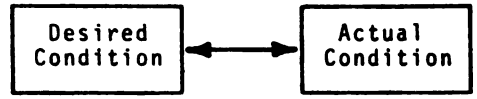
Step 2: Have the groups list what they think are priority problems. Each group should be mindful of the fact that a problem is a discrepancy between what is and what is desired (see Figure 2). Groups should be reminded that the concern is with problems that affect student learning.

Once the problem is listed, columns 2-8 should be checked (✓) if the answer to the ensuing criteria for each column is "yes."

Column (2):

Is the problem related to student learning inadequacies of an academic nature, such as the lack of knowledge of math, reading, science, or the like?

Definition of a Problem



A problem is a discrepency that exists between a desired condition and the actual condition.

In Column (1) use a short descriptive phrase to list discrepencies which you perceive to be Department problems.												
Column (1)		2	3	4	5	6	7	8				Total
A.												
B.												
C.												
D.												
E.												
F.												
G.												
H.												
I.												

FIGURE 2

Column (3):

Is the problem related to an attitudinal or motivational state?

Column (4):

Is the problem of learning inadequacy related to physical skills?

Column (5):

Is the problem of learning related to a breakdown in the hierarchy of prerequisite skills necessary to achieve successfully in a given discipline?

Column (6):

Is it a learning problem that is prevalent among the majority of students at a particular level?

Column (7):

Is it a problem that can possibly be solved using the existing resources within the school public?

Column (8):

Is there a lack of agreement among people within the school public about how well and under what conditions should students achieve in any identified problem area?

Step 3: Groups should tally the check marks in columns 2-8 and record in the total column. Based upon total scores and group judgment, a priority list of problems should be established.

Step 4: Select a committee to consolidate and list group priority problems.

Step 5: The committee will report findings to the school public. Get school public consensus. (See Figure 3.)

Step 6: The committee will organize the data in such a manner as to indicate the most pressing problems.

Guidelines for Writing a Goal Statement

A goal statement is a general comment about intentions that has structure and function. Structure comprises such matters as people, materials, equipment, and finance. Function tells what is going to be done with the structure in order to achieve the goal. For example, a goal statement might read: The English department consisting of a group of qualified teachers guided by a chairperson occupying offices and classroom space in the west wing of the building will offer a series of one-semester courses for 1/2 Carnegie unit each to remediate the deficiencies in English skills and understandings of the students at Cody Senior High School.

Writing Performance Objectives

Performance objectives are statements which describe behaviors which are expected as evidence of success in reaching the goals called for by the department. There are six major parts to be considered when establishing a

Survey of Educational Problems

Directions: Here is a list of educational problems as perceived by our school public. Mark on the scale from 1 through 5 your opinion for each problem listed.

1 means, "This is a most pressing problem; I'd want to see something done about it immediately".

2 means, "It is a pressing problem; I want something done before long".

3 means, "This problem is important, but it can wait until the pressing ones have been met".

4 means, "This is somewhat of a problem, but it is less than pressing".

5 means, "I do not perceive this as a problem at this time".

	1 Most Pressing	2 Pressing	3 Can Wait	4 Somewhat a Problem	5 No Problem
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					

FIGURE 3

performance objective:[61]

1. Institutional Variable (student, teacher, etc.)
2. Instructional Variable (content, etc.)
3. Behavioral Variable (cognitive, etc.)
4. Measurement Variable (tests or methods, etc.)
5. Time Needed Variable (one year, one term, etc.)
6. Proficiency Level Variable (grade equivalent, etc.)

The Michigan Department of Education offers the following format for writing and selecting performance objectives.

1. PERFORMER: Who is the performer? The individual(s) who will be involved in the instructional task may be at any level: a single student, an entire class, a school, the state, etc.

2. BEHAVIOR: How should the performer behave? The "HOW" variable determines what it is we will want the performer to do: analyze, complete, comprehend, develop knowledge, etc.

3. OBJECT: What is the object of the behavior? What do we want the performer to do? Do we wish for him to analyze a problem, complete a unit, comprehend a story, etc.?

4. TIME: When should the behavior occur? The element of time can be expressed as a future date, a number

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[61]Mager, p. 10.

of days or months, or a predetermined criterion level which is prerequisite to the next level.

5. HOW MEASURED: How is the behavior to be measured? The measure provides data as to the technique which will be employed to verify that the objective has been met. The HOW MEASURED element could employ a normative element, a teacher-made test, a state or national assessment battery, or an observational technique.

6. HOW WELL: How well is the performer to behave? The HOW WELL element is the criterion for success relative to the objective. It is the element of proficiency or degree of accomplishment.

In sum, then, a performance objective answers the ensuing questions:

A. What should the student know?

B. What should the student be able to do?

C. How do we recognize the outcome?

Criteria for Selecting a Strategy or Strategies for Implementation

In the sequence of problem solving, once the problem has been identified, the goal statement has been written, the performance objectives established, it is necessary to establish some criteria for selecting a strategy or strategies for achieving the objectives or accomplishing the mission. Important questions to be answered are raised in the ensuing discussion. However, these questions should be

used only as a guide because they are basic to selecting any strategy. It may become necessary for an academic department in a school system to add the specific criteria for selecting strategies which may be appropriate for its use.

1. Does the strategy selected support the performance objectives which have been established?
2. Is the strategy selected practical and does it have a reasonable chance for implementation?
3. What percentage of the students in the academic department are affected by the strategy?
4. What percentage of the staff in the academic department will support the strategy?
5. Is the strategy within the bounds of all legal and contractual agreements?
6. What percentage of the school public other than personnel is willing to support the strategy?
7. Are the proposed funds to be spent within present allotments?
8. Are there political considerations to take into account by employing a strategy that might affect members of the hierarchy above the departmental level?
9. Will the strategy proposed have any negative effects upon existing programs?

10. Do teachers have the necessary skills to employ the strategy or can they be taught the skills within the necessary time frame?
11. Are there any requisites involved in implementing the strategy which are inappropriate for the learner?
12. Do the program activities offer variety within the developmental capabilities of the learners?

Systematic Follow-Up

A monitoring system is a means of checking whether the strategies of the planned-program problem have been implemented as structured. Its functions are to:

1. provide information which will permit change in the planned program.
2. lead to changes in the way the original program is being implemented.

Without a follow-up system those who have to make decisions may fail to gather significant information during the implementation stage of a program. Information gathered throughout the program gives the decision-makers knowledge of which methods, materials, and practices are effective, and it lets the decision-makers know which methods, materials, and practices might need to be changed, revised, or adjusted.

When a systematic follow-up system is devised, the following questions should be taken into account:

1. What kind of organization is going to be used? (graded or non-graded)
2. What content is going to be used? (One subject area or a combination of subject areas)
3. What facilities will be used? (rooms, special equipment, resources, other facilities within the school public)
4. What teaching methods will be employed? (tutoring, lecturing, group discussion, etc.)
5. What measurement instruments and/or techniques will be used to receive feedback from the school public? (interview, questionnaire)
6. Who will supervise the program? (when and how often?)
7. How will the information received be used?

Evaluation

Being aware and trying to control, to the extent that it is possible, the multiplicity of variables which may affect the outcome of any program geared to help improve the achievement of students will help in selecting an evaluation design and in the interpretation of the results. It is by no means the intent of this writer to list all the variables which might affect a program; however, the list that follows is general and has some relevancy to most programs aimed at helping students to achieve:

1. Achievement Variables; e.g., scores in different subject areas
2. Classroom Environmental Variables; e.g., space, furniture, other buildings in the community of the school public
3. Program-Related Variables
4. Teaching Methods Variables
5. Characteristics of Students Variables
6. Characteristics of School Public Variables

The evaluation sequence is a management tool designed to help those responsible make better decisions. The accountable personnel should be aware of the aforementioned variables of evaluation and be able to answer the following questions:

1. What is being evaluated?
2. Who is the target population?
3. What is the time period of the program?
4. What are some of the anticipated outcomes of the program?
5. What percentage of those persons involved in the program are expected to achieve?
6. What level of proficiency is expected of those involved in the program?
7. How will the results be reported to the school public?
8. How will the findings be used?

Reiteration is the last entity of the curriculum model. It is the process that controls or feeds back information to indicate any planning inadequacies or variations from plans. It provides an opportunity for the school public to change any aspect of the model when it evaluates and finds what is being done is not workable or practical.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The outcry for better achievement by students can be heard from all segments of the school public. When we speak of achievement of students in a school environment, the personnel employed by the school public is directly responsible, and responsible people must be held accountable for their actions and actions of those persons who look to them for guidance and direction. The department chairperson is in the unique position of being responsible for the achievement of students in his or her academic discipline; as the manager or leader, the chairperson directs all activities and evaluates their effectiveness. At this point, this writer would like to say something about the forces, external and internal, which influence decisions. (See Figure 4.) This writer, on the basis of his experience as an academic chairperson for nine years, contends that a systems model will assist the department chairperson in dealing with the multiplicity of forces which influence decisions.

Management Problems

Management problems are those factors internal and external that play a part in the decision-making of a high school academic department head when he or she is attempting to deal with the most pressing problems within a department. For the most part, the comments, ideas, and procedures in this section are adapted from Richard L. Featherstone.[62] While Featherstone was directing his remarks about management problems toward the attention of higher education, this writer finds them highly appropriate to the development of management systems for a high school academic department. It is the judgment of this writer that the problems presented in this section are prevalent in most high school academic departments.

The discussion is arranged under the following headings:

1. Factors influencing the department head's decision
   - A. Internal forces
   - B. External forces
2. Issues and problems
3. Departmental functions

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[62]Featherstone, pp. 37-52.

Factors Influencing the Department Head's Decisions

Within the school public there are forces, external and internal, which demand information and data from a department head. The external forces tend to be outside the high school environment; the internal forces tend to be within the high school environment. A chart is presented to show the forces, external and internal, that have some relevancy to the decisions that a department head makes. The writer has modified the chart prepared by Richard L. Featherstone,[63] who described the forces that play on the department chairman in institutions of higher education.

This chart, designated Figure 4, shows the department head in the center of multiple forces and influences, external and internal, which affect his decision-making.

Internal Forces

Obviously, the largest number of requests for data and information come from within the school environment, and the pressures are consistent. Teachers and students lead in the frequency of requests. Teachers' requests follow a general pattern: information about introducing new texts, information about using supplementary materials, field trips, and bringing in outside speakers are typical of the kinds of requests made by teachers. Students' requests involve matters like what courses should they take

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[63] Ibid., p. 39.

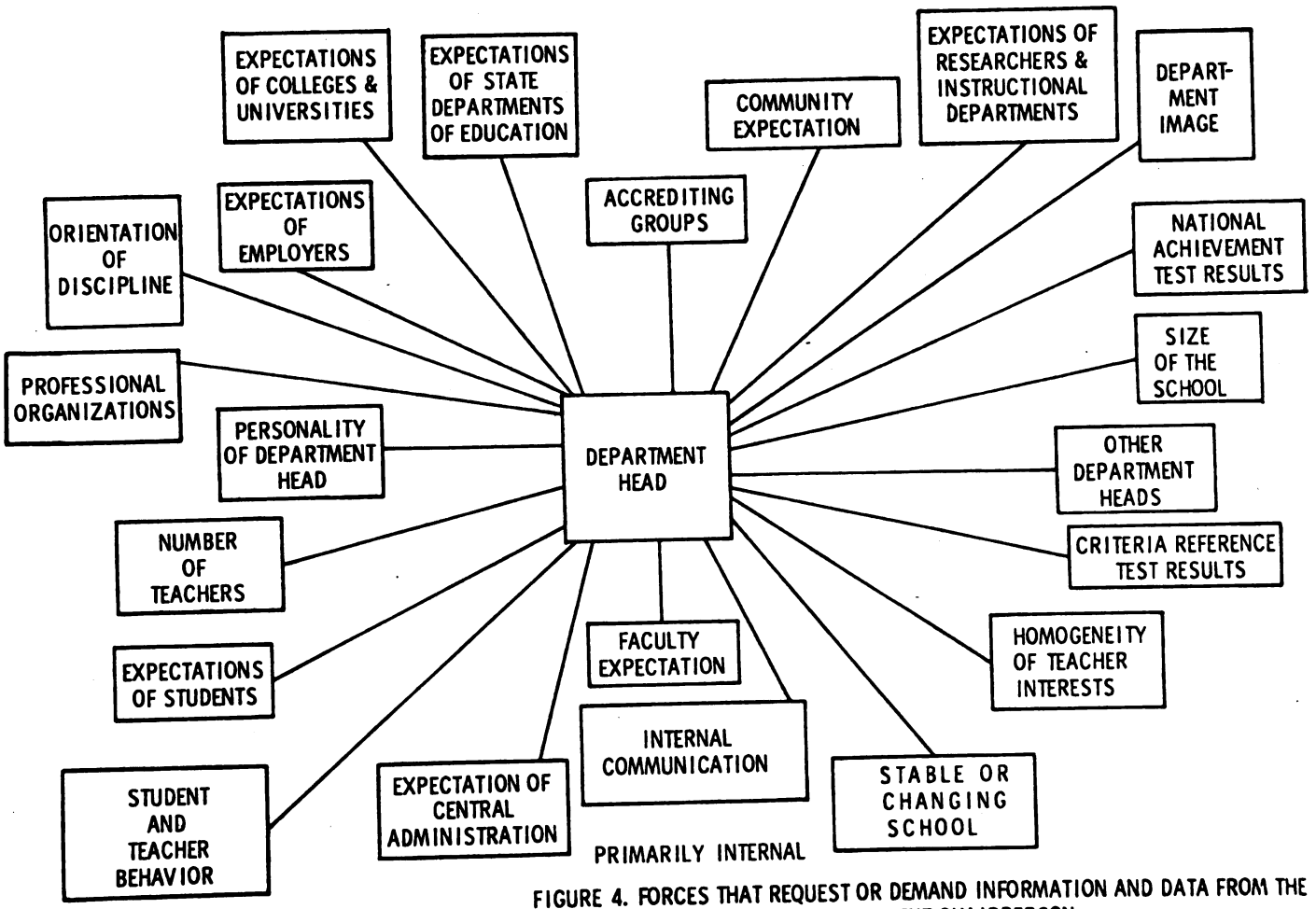

FIGURE 4. FORCES THAT REQUEST OR DEMAND INFORMATION AND DATA FROM THE DEPARTMENT CHAIRPERSON

in order to be successful in college, changes in programs because of challenging demands made upon them in the courses assigned, changes because students feel the courses are not challenging, and changes because of personality conflicts between teachers and students.

The principal's office within a high school makes many requests from the department head. Such matters as teacher-pupil ratio, failure percentages, book inventories, and attendance records are typical examples.

Although there are other internal forces which request information and data from the department head, those discussed above are typical and have a high degree of frequency.

External Forces

There are a substantial number of external forces and groups which request information and data from the department head. The one group that applies constant pressure for information is the parent group. Typical of the kind of information sought by parents is, "What can we do to help our children pass the course?" The unfortunate thing about this request is that it is usually made at a time when little or no time is left for the student to adjust his behavior and study habits in order to become successful. Naturally, there are a multiplicity of requests from outside of the school environment. For example, professional groups, the division of instructional research,

accrediting groups, and many others request information from time to time during the course of a year; however, parents' concerns about the successful completion of courses by their offspring stand out in the experience of this writer.

Issues and Problems

The issues which should be of importance to the department head are human issues. Among the many important questions are:

1. What can be done in the management of a high school academic department to help all segments of the school public feel a kinship toward it?
2. What can be done to provide the most educational return to the student for the money, time, and energy expended.
3. What can be done to improve the quality of interactions among all segments of the school public?
4. What can be done to solve the pressing problems which deter student success in academic as well as professional life?

There are no ready-made or simple answers to the questions raised. However, a workable overall answer might be the development of management systems for a high school academic department that allows for behavior change through increased information and improved decision making. It is

hypothesized here that the school public, by having input ab initio in a management systems approach, will help those responsible make more intelligent decisions because of more usable information.

The difference between the desired behavior expected of students and the actual behavior exhibited seems to be widening. This problem appears to be insurmountable because the issues are value-laden; however, good management can contribute to the solution of such a problem. Good management must be structured toward treating each member of the school public with dignity as he works toward departmental goals. The tools used in a management system may be designed to control the participants' activities when they are inconsistent with the departmental goals. This is a crucial issue: tools to serve or tools to control? The locus of goal and objective development in the past, for the most part, has been the Central Board. It has been the central administration which has established policies, and each succeeding level in the hierarchy was duty-bound to work toward fulfilling the goals and policies established by the central administration. While the goals of the school public might be analogous to those of the central board, teachers in particular feel that they are being controlled. Parents, too, feel that they do not have enough input with respect to the education of their children. Is there another approach to goal setting and objective development? What

segment of the school public should set policy? Should every segment be involved? Management systems approach applied to a high school academic department makes provisions for every segment of the school public to get involved in terms of establishing goals and objectives for an academic department.

Many administrators have been opposed to the application of management systems and the use of planning and management tools, while many others have adopted the management systems approach with hope and enthusiasm. Teachers, on the other hand, have been laggards relative to making use of management tools. The administration-teacher level is likely to be the crisis level of adaptation to the adoption of systems development. In order that teacher and administration may work for similar goals, some type of transition matrix will be necessary. It is possible that transition may be made through negotiations.

In sum, then, questions relating to goals, objectives, and control may be resolved through the negotiations route. Teachers and administrators may, through some very frank discussion, agree and avoid such unwholesome things as strikes and punitive actions.

Issues and problems of the nature discussed here should not deter the development of management systems, but they should have a major effect on the implementation and utilization of the management tools designed. Moreover,

the developer of a model for a high school academic department should examine his conceptualization of the project with respect to the issues and problems.

Departmental Functions

The two chief functions of an academic department in a high school are: (1) to provide instruction that will help students improve their achievement level, and (2) to provide leadership that will help students transfer achievement in school into useful work and productive citizenry in the milieu of the community. Some of the actions a department might take which will support the aforementioned functions include:

A. Operations
    1. Program initiation
    2. Program maintenance
    3. Personnel
        a. competency utilization
        b. performance appraisal
    4. Logistics
        a. finance
        b. support services
    5. Communication and services
        a. within system
        b. outside system

B. Planning and Development

1. Program development

2. Application of technology

3. Department goals and objectives

C. Evaluation

1. Program effectiveness and benefits

2. Comparability of program, costs, benefits

3. Value of program to society

The ultimate success of developing management systems applied to an academic high school department is dependent upon (1) never forgetting the fact that the system is dealing with people and (2) the system should serve, not control, any facet of the school public. Therefore, one must recognize that there are at least three philosophies of management science which are prevalent: scientific, administrative, and humanistic. This writer finds that the humanistic philosophy of management is more appropriate for education, for it encompasses human values and concerns. James R. Cooper stated it this way:

> Any human relations endeavor must meet the test of what Peter Drucker calls the "whole man"--not merely a man who is economic, social, political and biological, but who is also purposive, rational, creative and spiritual. Thus we can distinguish between ends and means, and equally important, between proper ends and justifiable means. From this point of view, man's destiny in the business and industrial life of our world takes on new significance. His needs, now determined by our definition, indicate that we have short-changed work as a medium through which man can achieve his highest fulfillment as a human being. The emphasis must be upon man, and the work must be organized to fit him. No

> longer can we attempt to adapt man to the machine--the machine must now be adapted to the man. No longer do we dare "utilize" men, or level them down to the "average work load." Instead we must motivate them, by increasing, through higher demands, opportunities for challenge and growth.[64]

If a systems model that makes use of management science techniques is going to be successful, its users must never forget that the system is dealing with people, and they must be treated with concern, respect, and dignity.

Having established the humanistic philosophy base, this writer has attempted to integrate the appropriate concepts presented by management science theorists into a systems model that will be useful to a high school academic department. Basically, these concepts are: (1) obtaining data, (2) defining a problem, (3) establishing a goal, (4) writing performance objectives, (5) developing strategies, (6) selecting a strategy or strategies, (7) taking action, (8) evaluating, and (9) reiterating.

For each of the aforementioned concepts the systems model allows for involvement of the total school public; it allows for the evaluation of each concept; and it permits the users to make adjustments at any stage when the activities designed to implement a concept are not accomplishing the objectives. Therefore, this writer believes

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[64]James Howard Cooper, "The Crisis in Human Relations," in Readings in Human Relations, ed. by Keith Davis and William G. Scott (New York: McGraw-Hill Book Company, 1964), pp. 417-418.

that the systems model presented in this dissertation will provide a systematic approach for helping students to achieve better; the systems model is tantamount to an accountability model for the personnel directly responsible for the achievement of students; and the systems model will help those responsible make better use of finances, facilities, and personnel.

What, then, are the implications of the curriculum model presented in this dissertation?

Recommendations

The result of this study, the development of a model using management systems techniques for a high school academic department, is suggestive of certain recommendations for further study:

1. Try out the model in a school public and evaluate its effectiveness.
2. Further develop, evaluate, and refine the methods and procedures used for getting involvement from all segments of the school public.
3. Place more emphasis on teacher behavior and its effect on student achievement.
4. Develop a systematic planning format that makes more specific use of supportive services (social workers, school psychologists, counselors, etc.)

The need for immediate and continuing study in an effort to help students achieve better is critical. This writer only hopes that his effort will motivate some interested person to "strive, to seek, to find, and not to yield."

BIBLIOGRAPHY

BIBLIOGRAPHY

Books and Pamphlets

Albers, Henry H. Principles of Management: A Modern Approach. New York: John Wiley and Sons, Inc., 1969.

Anderson, Conwell A. Administrative Team Leadership in Concept and Practice. Athens, Georgia: Institute of Higher Education, 1966.

Appley, Lawrence A. Values in Management. New York: American Management Association, 1969.

Bell, Terrel H. Proceedings of the Conference on Educational Accountability. Princeton, New Jersey: Educational Testing Service, 1971.

Blake, Robert R., and Mouton, June S. The Managerial Grid. Houston: Gulf Publishing Co., 1964.

Bross, Irvin D. J. Design for Decision. New York: Macmillan Company, 1953.

Bruner, Jerome S. The Process of Education. New York: Random House, 1960.

Chin, Robert; Bennis, Warren G.; and Benne, Kenneth D. Planning Change. New York: Holt, Rinehart and Winston, Inc., 1961.

Combs, Arthur. Educational Accountability--Beyond Behavioral Objectives. Association for Supervision and Curriculum Development, 1972.

Copley, Frank B. Frederick W. Taylor, "Father of Scientific Management." New York: Harper and Brothers Publishers, 1923.

Davis, Keith, and Scott, William G. Readings in Human Relations. New York: McGraw-Hill Book Company, 1964.

Emery, David A. The Compleat Manager. New York: McGraw-Hill Book Co., 1970.

Featherstone, Richard L. The Development of Management for the Academic Department. National Center for Higher Education Management Systems, 1972.

Fensh, Edwin A., and Wilson, Robert D. The Superintendency Team. Columbus, Ohio: Charles E. Merrill Books, 1964.

Gagne, Robert M. The Conditions of Learning. New York: Holt, Rinehart and Winston, Inc., 1970.

Likert, Rensis. New Patterns of Management. New York: McGraw-Hill Book Co., 1961.

Mager, Robert O. Preparing Instructional Objectives. Palo Alto, Calif.: Fearon Publishers, 1962.

March, James G., and Simon, Herbert A. Organizations. New York: John Wiley and Sons, 1958.

Massie, Joseph L. Essentials of Management. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1971.

Niles, Mary Cushing. The Essence of Management. New York: Harper and Brothers Publishers, 1958.

McGregor, Douglas. The Human Side of Enterprise. New York: McGraw-Hill Book Co., 1960.

_____. The Professional Manager. New York: McGraw-Hill Book Co., 1967.

Rosenthal, Robert, and Jacobson, Lenore. Pygmalion in the Classroom. New York: Holt, Rinehart and Winston, Inc., 1968.

Savage, William W. Interpersonal and Group Relations in Educational Administration. Atlanta: Scott, Foresman and Co., 1968.

Schoderbek, Peter P. Management Systems. New York: John Wiley and Sons, Inc., 1968.

Skinner, B. F. Beyond Freedom and Dignity. New York: Random House, 1971.

Torrance, Ellis Paul. Rewarding Creative Behavior. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1965.

U.S. Department of the Army. Army Command Policy and Procedure. Washington, D.C.: Government Printing Office, 1971.

Wadsworth, Barry. Piaget's Theory of Cognitive Development. New York: David McKay Co., Inc., 1971.

Periodical Articles

Altimari, William G. "The Department Chairman in Large High Schools of North Central Association." North Central Association Quarterly, XLII (Spring, 1968), 310-11.

Anderson, Lester W. "Management Team Concept." Michigan Journal of Secondary Education, X (Spring, 1969).

Atkin, Myron J. "Behavioral Objectives in Curriculum Design." The Science Teacher, XXXV (May, 1968), 27-30.

Beer, Stafford. "What Has Cybernetics to Do With Operational Research." Operational Research Quarterly, March, 1959.

Boston, Robert E. "Management by Objectives: A Management System for Education." Educational Technology, XII (May, 1972), 49.

Burlingame, John F. "Information Technology and Decentralization." Harvard Business Review, XXXIX (November-December, 1961), 121-26.

Chambers, R. J. "The Role of Information in Decision Making." Management Technology, June, 1964.

Haberman, Martin. "Behavioral Objectives: Bandwagon or Breakthrough?" Journal of Teacher Education, XIX (Spring, 1968), 91-92.

Heselton, Frank. "Management Team Concept From Board Member's Viewpoint." Michigan School Board Journal, XV (January, 1969).

Knudson, Richard L. "Help Stamp Out Department Chairmen." English Journal, LX (March, 1971).

Lessinger, Leon. "Engineering Accountability for Results in Public Education." Phi Delta Kappan, LII (December, 1970), 217.

Manlove, Donald, and Buser, Robert. "The Department Head: Myth and Reality." Education Digest, XXXII (February, 1967), 38-41.

Riggs, Robert O. "Management by Objectives: Its Utilization in the Management of Administrative Performance." Contemporary Education, XLIII (January, 1972), 129-30.

Scott, William G. "Organizational Theory: An Overview and an Appraisal." Journal of the Academy of Management, IV (April, 1961), 7-26.

Stansbury, George W., and Huenecke, Dorothy. "Curriculum Management and Instructional Development: A Cooperative Venture." Educational Leadership, XXX (January, 1973), 318.

Thorum, Reho F. "The Department Head in the Large Senior High School." Clearing House, XLIII (January, 1969).

Veidemanis, Gladys. "Frankly Speaking--A Candid View of the Department Chairman's Role." English Journal, LVI (Spetember, 1967), 832.

Walker, Robert W. "The Management Team Concept." Michigan School Board Journal, XV (January, 1969), 11.

_____, and Hammel, Eugene C. "Management by Design Using the Team Approach." Michigan School Board Journal, XVI (February, 1969).