A DESCRIPTION OF MANAGEMENT STYLES AND RESOURCE SUPPORT SYSTEMS OF MICHIGAN COMMUNITY COLLEGE OCCUPATIONAL DEANS: IMPLICATIONS FOR ADOPTION OF MANAGEMENT BY OBJECTIVES

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A THESIS

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

ABSTRACT

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PURPOSE: To determine the extent to which the management styles employed by Occupational Deans in Michigan community colleges and the resource support systems available to them function in a manner supportive of Management by Objectives.

METHOD OF RESEARCH: Questionnaires were sent to all Occupational Deans in Michigan community colleges as identified in the Michigan State Department of Education Directory of Vocational Administrators. The study included thirty Occupational Deans; 100 percent of the questionnaires were returned in usable form.

SUMMARY:

(1) The Occupational Deans demonstrated a belief that their subordinates were able to manage their own jobs in a manner which is conducive to the use of Management-by-Objectives (MBO). In seventy percent of the instances measured the Occupational

Deans gave positive responses to items concerned with their subordinates' abilities to utilize MBO.

(2) The Occupational Deans revealed their own management styles to be more similar to McGregor's Theory X than Theory Y. Such a management style is not conducive to the successful implementation and utilization of MBO. In only forty percent of the instances measured did the Occupational Deans respond positively to questionnaire items concerning their present management methodology.

(3) The resource support systems utilized by the Occupational Deans were demonstrated to be supportive of goal achievement in 59.5 percent of the instances measured. The resource support systems function only marginally supportive of MBO in terms of goal orientation.

(4) Control of the resource support systems by the Occupational Deans was revealed to exist in 63.7 percent of the instances measured. The scores on the questionnaire items indicated that the control exercised by the deans is only marginally acceptable to the successful utilization of MBO.

(5) The adaptability of the resource support systems to change was found to be relatively limited.

In only 39.5 percent of the instances measured was it found that the resource support systems could be readily changed to meet new circumstances. Such limited adaptability is not conducive to MBO.

(6) The resource support systems appeared to be providing information feedback to the Occupational Deans in 86.3 percent of the instances measured. Such a rate of information feedback is conducive to the successful implementation and utilization of MBO.

(7) The resource support systems included in the study were:

a. Salary Administration -- supportive of MBO in 39.2 percent of the instances measured.

b. Operational Budget -- supportive of MBO in 67.8 percent of the instances measured.

c. Personnel Employment -- supportive of MBO in 69.9 percent of the instances measured.

d. Staff Workload Assignment -- supportive of MBO in 72 percent of the instances measured.

(8) The factors of college size and organizational structure did not appear to significantly affect the scores of the Occupational Deans as a group on the subscales of the questionnaires. However, significant relationships were found to exist between the factor of college size and the

Personnel Employment resource support system and the factor of organizational structure and the Managers' Management Methodology and the Personnel Employment resource support system in the analysis of correlation between the factors and the responses of the deans as individuals.

IMPLICATIONS:

(1) Occupational Deans in Michigan community colleges are dissimilar from one another in their mode of operation in administering occupational education. No single management system is likely to succeed for all of the Occupational Deans.

(2) In general, the Occupational Deans will have to change their management styles to effectively utilize MBO. Their assumptions as to their subordinates' abilities to work under MBO are not matched by the management styles they employ.

(3) The resource support systems available to the Occupational Deans do not operate in a manner fully supportive of MBO. In order to successfully implement and utilize MBO, the resource support systems should become more goal oriented, controllable by the deans, and adaptable to change.

To Rennie and Kristi

whose unswerving faith

made this possible

ACKNOWLEDGMENTS

The writer wishes to express his gratitude to those persons who generously assisted him in the study.

Special appreciation is expressed to Dr. Robert P. Poland, academic advisor and dissertation director; Dr. Beatrice Paolucci; Dr. Max R. Raines; and Dr. George W. Ferns, committee members.

In particular, the writer wishes to express his gratitude to his wife, Rennie, who generously gave of her time in the preparation of the study.

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CHAPTER I

INTRODUCTION TO THE STUDY

Today, community college occupational educators are faced with a demand for accountability to the public they serve. To meet such a demand requires management techniques which focus on results, and one such technique, Management-by-Objectives, is being advocated by many writers as the management technique to be adopted by community college administrators. The adoption and successful implementation of Management-by-Objectives (hereafter referred to as MBO) require certain factors to be present in the situation in which the technique is to be utilized. Among those factors are two important determinants of success; the top administrator of the organization must be committed to MBO and the resource systems upon which he must depend for goal accomplishment must function in a manner supportive of MBO. The study herein described is an investigation of the readiness of Occupational Deans in Michigan community colleges to utilize MBO and of the characteristics of the resource support systems in those colleges as they pertain to the successful functioning of MBO.

Background of the Problem

Public education is faced with a demand for accountability to the public it serves. The word accountability is laden with a host of meanings. It may seem threatening and unreasonable to educators who are reluctant to accept responsibility for the product of their efforts, it might be viewed as a fashionable slogan by those with a desire to attack education's disordered strongholds, it does have profound implications for community colleges which serve a variety of students from diverse educational backgrounds and which are committed to preparing students for employment in many occupations.

Accountability has two essential characteristics when applied to the community college: management results and measurement. Accountability accents results; it is aimed squarely at what comes out of an education system rather than what goes into it. Accountability requires measurement against relevant criteria; with the establishment of specific behavioral objectives, educators can be held accountable for students behavior that is different than that possible before teaching took place. The concept of accountability is based on specifically defined objectives, measurement techniques and methods that guarantee meeting the objectives.

Management techniques employed in community colleges in the past have not stressed results or measurement to the extent that accountability in community college administration could come into full fruition. However, a technique developed in industry in the past decade, Management-by-Objectives, is making its debut in community college administration, and according to many educational writers, is the device which will enable community college administrators to bring about accountability in education.[1]

Management-by-Objectives is a widely accepted approach to management popularized by such writers as Drucker, McGregor, and Odiorne. It is a process by which superordinate and subordinate managers of an organization jointly identify its common goals, define each individual's major areas of responsibility in terms of results expected of him, and use these measures as guides for operating the unit and assessing the contribution of each of its members.

In theory almost all MBO programs are essentially similar and contain the following basic concepts:

1. Goals for the organization are established.
2. Objectives are established for each person in a managerial position and are supportive of the organization goals.

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[1]John E. Roueche, Accountability and the Community College: Directions for the 70's, Washington, D.C.,; American Association of Junior Colleges, Jan. 1971, pp. 8-30.

3. Objectives for the subordinate are established jointly by the subordinate and his superior in a participative manner.

4. Objectives are formulated in such a way as to be measurable and controllable.

5. A periodic review system is set up to assess progress towards objective accomplishment, determine problems and successes, alter either objectives or means, and establish new objectives.[2]

The central hypothesis of the motivational basis for Management-by-Objectives is that "regardless of organizational level or type of work, men will work harder, gain most personal satisfaction, and contribute most to the organization as a whole if they regard contributing to the work objectives of the component as the best available means to fulfilling their own work values now and in the foreseeable future."[3]

There has recently been widespread endorsement of MBO as a viable technique for use in public education, the United States Department of Health, Education, and Welfare (HEW) is currently operating on an MBO basis according to Mr. Rodney H. Brady, Assistant Secretary for Administration and Management at the Department of Health, Education, and

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[2]William J. Reddin, Effective Management by Objectives, New York, McGraw-Hill Book Company, 1971, pp. 12-14.

[3]David A. Emery, "Managerial Leadership through Motivation by Objectives," Personnel Psychology, Spring, 1959, pp. 3.

Welfare (HEW).[4] The experience at HEW with MBO is reported to be successful in spite of the obvious difficulties of managing an organization of such diverse objectives and immense size.

Several states have adopted MBO as the management system for their entire state supported school systems.[5] The State of Oklahoma Department of Vocational and Technical Education has installed MBO and found it to be an effective management system.[6] The Michigan Department of Education, Vocational Education and Career Development Service, (VECDS) has been utilizing MBO in its operations since June, 1973 and has found it to be a satisfactory mode of operation.[7] The VECDS is encouraging community colleges in Michigan to employ MBO in providing occupational education and has required Occupational Deans to establish professional

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[4]Rodney H. Brady, "MBO goes to work in the public sector", Harvard Business Review, Mar-Apr., 1973, pp. 65-74.

[5]William W. Stevenson, Assistant State Director, Oklanoma State Dept. of Voc. Tech. Educ., "Management by Objectives-State Level" (speech delivered at 1972 AVA Convention, Chicago, Illinois, Dec., 1972).

[6]Charles O. Hopkins, "Implementing Management by Objectives", American Vocational Journal, Feb., 1974, pp. 36-38.

[7]Statement by Dr. John Shanahan, Supervisor, VECDS Post Secondary Unit, personal interview, Nov. 14, 1973.

objectives and submit them to the VECDS as a condition of salary reimbursement to the community colleges.[8]

In October, 1971, the Vocational Education and Career Development Services, Michigan State Department of Education co-sponsored the first of a series of three workshops for occupational education administrators in the State of Michigan. The workshop which took place on that day and the next carried the theme, "Management-By-Objectives." The series of workshops was sponsored also by the Michigan Council of Vocational Administrators, the Michigan Occupational Deans Administrative Council, and the University of Michigan Extension Service and School of Education. The stated purpose of the workshop was as follows:

> To bring together occupational education administrators from all levels of education in the State of Michigan to focus on management by objectives for school administrators.

The workshop speakers lectured on the advantages of utilization of the MBO approach to managing enterprises, explained the concepts involved in the approach, and urged early adoption of it in the administration of occupational education in the various schools in Michigan including the community colleges.[9]

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[8]Michigan Department of Education, Vocational Education & Career Development Service, Administrative Guide for Vocational Education and Career Development Administration, Section B-01, 1973.

[9]Based upon author's personal attendance at the above described workshop on MBO.

Need for the Study

A review of literature pertaining to MBO reveals that there are two essential factors which must be present in any situation in which Management-by-Objectives is to be successfully implemented. The top administrators of the organization must endorse the concepts of MBO and utilize management styles conducive to those concepts, and the system in which MBO is to be utilized must be supportive of MBO.

There exists some doubt as to whether or not community college administrators will be able to successfully utilize MBO. According to many critics of higher education, administrators get bogged down in tending to immediate problems and fail to plan effectively for meeting future contingencies.[10] This study investigates the critical variable of management style as defined by the attitudes and assumptions of the Occupational Deans in Michigan community colleges. The results indicate the extent to which the management styles of the Occupational Deans are supportive of the effective utilization of the MBO technique.

The active commitment of the top administrator of an organizational unit to the concepts of MBO must be

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[10]Robert E. Lahti, "Vistas to More Administrative Accountability" (paper presented at an accountability seminar, Durham, North Carolina, June 14, 1971),p. 3.

accompanied by a commitment of support from the support systems within the organization if MBO is to succeed.

To be supportive of MBO the resource support systems must be goal oriented, controllable by the manager, adaptive to changing needs, and must provide feedback to the manager. If the resource support systems of an organization do not provide the resources necessary to accomplish organizational and personal goals and if the manager is unable to utilize the resources in the manner he feels can best accomplish his objectives, the system is managing the individual manager, and MBO will not function optimally.

Purpose of the Study

The effective use of MBO as a management technique requires that a certain management style be employed and certain resource support systems exist where the technique is to be utilized. Occupational programs in Michigan community colleges are managed by Occupational Deans who employ certain management styles and have at their disposal certain resources. The purpose of this study was to determine:

1. The extent to which the managerial styles of the Occupational Deans in the community colleges are similar to that described as appropriate for MBO in the Odiorne MBO Readiness Questionnaire.

2. The extent to which the selected resource support systems of the community college are:

   A. oriented to the goals of the occupational programs of the community college.

   B. controllable by the Occupational Dean.

   C. adaptable to changing needs of the occupational programs.

   D. giving feedback information to the Occupational Dean.

Recognizing the diversity of both size and organizational structure of Michigan community colleges, the study also sought to determine if a relationship exists between the managerial styles of the Occupational Deans, the selected resource support systems and the factors of size and organizational structure.

The results of the study should prove to be valuable to those who desire to implement Management-by-Objectives in Michigan community colleges or in community colleges elsewhere. The study should reveal a significant aspect of the management of occupational programs as it now exists in Michigan community colleges. Such knowledge should be of value in developing MBO implementation strategies.

Limitations and Assumptions of the Study

The scope of this study is limited to the twenty-nine community colleges (thirty campuses and thirty Occupational Deans) in Michigan. The study is further limited to the designated Occupational Dean in each

community college identified by the Michigan Department of Education, Vocational Education and Career Development Service. It is recognized that other Deans in various departments in community colleges also administer occupational programs, however it is assumed that the designated Occupational Dean is the one person in each community college most responsible for the administration of occupational programs in that institution.

It is recognized that the organizational structure of the various public community colleges in Michigan differs in complexity and size, however it is assumed that that portion which is most concerned with occupational programs and is under the direct administration of the designated Occupational Dean is sufficiently similar with all others of a similar size as to allow the study to be conducted.

The validity of the study is limited by the fact that MBO is based upon unproven management theories, values and assumptions. Furthermore, the conclusions drawn concerning the management styles of the Deans and the support systems of the colleges are valid only to the extent that such information can be gathered by instrument and assessed by the researcher. The conclusions can be applied directly only to the population included in the study.

Definition of Terms

Management-by-Objectives (MBO) is an approach to management popularized by such writers as Drucker, McGregor, and Odiorne. It is a process by which the superior and subordinate managers of an organization jointly identify its common goals, define each individual's major areas of responsibility in terms of results expected of him, and use these measures as guides for operating the unit and assessing the contribution of each of its members.

Occupational Program is a series of identifiable learning experiences (including classroom instruction) leading to entry employment in an occupation identified in Vocational Education and Occupations, OE-80061.

Occupational Dean is that person identified by the Michigan Department of Education, Vocational Education and Career Development Service as the local community college administrator having primary responsibility for the administration of community college occupational education programs and courses, and regardless of his actual title, is listed in the MDE 1973-74 Directory of Vocational Administrators as an "Occupational Dean."

Community College is taken to be one of the twenty-nine, two-year, public, post-secondary institutions listed in conjunction with the Occupational Deans in the Directory of Vocational Administrators.

Management Style is the specific or characteristic manner or mode of expression in language or in action by

which the act of controlling, directing, or handling of people and resources is carried out.

Resource Support System is a unit in an integrated assembly of interacting elements designed to carry out cooperatively a pre-determined function of providing resources.

Size, for the purpose of this study, is to be indicated by the number of Full-Year Equated Students (FYES) enrolled in occupational courses during the 1972-73 school year.

Organizational Structure is a design of human relationships and patterns of interaction established to achieve (a) predetermined objective(s). For the purpose of this study, organizational structure is taken to be the formal hierarchical structure established through position titles and responsibilities as indicated on an organization chart.

Salary Administration System is that segment of the fiscal administration of a community college which determines and implements the initial salary of a new employee and the increases in salary each employee receives.

Operational Budget System is that segment of the fiscal administration of a community college which determines and implements the amounts of dollars expended in the operation of the community college excluding those dollars expended for personnel salaries and capital outlays such as new buildings, etc.

Personnel Employment System is that segment of the administration of a community college which is responsible for securing new personnel for openings within the college and is also responsible for dismissing those persons whose services are no longer required.

Staff Workload Assignment System is that segment of the administration of a community college which is responsible for assigning functions to be performed by specific individuals or groups of individuals.

Goal Oriented is a term which indicates that the system so described allocates resources to achieve specific goals and that prior to the allocation of the resources those goals are determined and articulated.

Controllable by the User is a term which indicates that the person who is to use a system has the authority to direct or regulate the system as he deems necessary, (within the scope of policies of the organization of which he is a part).

Adaptable to Change is a term which indicates that the system so described exhibits flexibility in altering its operation to meet the demands of changing circumstances as those circumstances become apparent.

Provides Information Feedback is a term which indicates that the system so described provides the user with facts and data concerning the internal operation and achievement of the components of the system and does so on a continual basis.

CHAPTER II

REVIEW OF RELATED LITERATURE AND RESEARCH

This chapter presents a review of literature and research related to the implementation and utilization of MBO in the administration of occupational education in the community college setting. The chapter is divided into two main sections: (1) Review of Literature and (2) Review of Research. The section concerned with the review of literature is divided into two subtopics: (1) Management Style and Concepts and (2) Resource Support Systems. The section of the chapter concerned with related research is divided into three subtopics: (1) Management-by-Objectives, (2) Community College Support Systems, and (3) Administrative Styles and Roles. Immediately following the presentation of information in each section is a summary of the information presented and a discussion of the significance of that information to the adoption of MBO by Michigan community colleges.

Review of Literature

Two essential factors stand out in books and articles concerned with the implementation of MBO as the key determinants of success in the utilization of the MBO technique. The top administrators of the organization must utilize management styles supportive

of the concepts of MBO and the resource support systems must provide the resources necessary for the managers to accomplish their set objectives.

Management Style and Concepts

> The primary condition that must be met in installing a system of management by objectives is the support, endorsement, or permission of the principle manager in the organizational unit where the system is to be used.[11]

Almost every book or article concerned with the implementation of MBO in an organizational unit refers to the necessity of the manager's support of MBO and sincere utilization of it. Collins states that whether MBO will succeed or fail in the community college in its efforts to bring about the benefits alleged to MBO will largely be determined by the attitudes and actions of administrators. Administrators are critical to the process because they serve as communicators of goals and expectations throughout the college.[12] Hopkins identifies the major stumbling block to successful implementation of MBO as the, "lack of commitment by the top

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[11] Management by Objectives, An In-Service Manual for the Administrative Staffs of League For West Central Michigan Community Colleges, (Unpublished manual, 1972), p. 10.

[12] Robert W. Collins," Management-by-Objectives: Advantages, Problems, Implications for Community Colleges," (Unpublished paper presented at University of Southern California, 1971),p. 11.

administration to support the system."[13] Carvalho points out that the successful installation of MBO requires the development of results oriented, responsibility-sharing, and non-zero-sum attitudes in all managers.[14]

Not all managers in higher education feel the need to evaluate their own particular attitudes and assumptions in regards to a system such as MBO. Some look upon what they have been doing as a form of MBO and express very little concern with altering their management style, where necessary, to incorporate MBO concepts. A comment by Dr. Edward J. Bloustein, President of Rutgers University serves to exemplify the situation.

> I think management by objectives is a new word for something as ancient as any intelligent effort at determining how successful a particular project has been, and like so many fancy new words, it confuses some people more than it helps. ... We have been undertaking management by objectives studies without really calling them that for a long time.[15]

Studies of top management officials in private industry demonstrate that there exists a large discrepancy

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[13]Hopkins, op. cit. p. 38.

[14]Gerald F. Carvalho, "Installing Management by Objectives: A New Perspective on Organization Change," Human Resource Management, Spring, 1972, p. 23.

[15]Dr. Edward J. Bloustein, "A Philosopher's View of the University", College Management, Feb., 1973, p. 12.

between a manager's professed leadership style and the one he uses. Nearly 95% of the managers in the studies emphasized the importance of openness, risk taking, and trust. The studies showed that risk taking, experimenting, openness, and trust were rarely observed in the actions of the managers.[16] The things one truly believes in, the values one holds, the general assumptions one makes about his activities and the people in his organization directly influence the way in which he manages. However, as the Argyris studies show, managers may not be aware of what their actual attitudes and assumptions really are. Verbal endorsement of MBO by the top manager followed by actions reflecting little utilization of major components of the management system will lead to a breakdown in the effort to implement MBO and will eventually completely discredit the concept.[17]

George Odiorne describes the MBO system as based upon assumptions that human beings are capable of becoming committed to their work and can become highly devoted to the activity in which they are engaged. There are, however,

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[16]Chris Argyris, "Top Management Blindness," A Practical Approach to Organization Development through MBO, ed. A. C. Beck, Jr., and E. D. Hillmar (Menlo Park, Calif.: Addison-Wesley Pub. Co., 1972), pp. 279-281.

[17]Thomas Connellan and Robert E. Lahti "Managing Community Colleges by Objectives" (speech delivered at Midwest Community College Leadership Council at Michigan State University, July 14, 1971), p. 14.

many managers who utilize management styles similar to that described by Douglas McGregor in his book, The Human Side of Enterprise,[18] as Theory X. Such a manager cannot successfully use MBO; he will be inclined to establish the objectives he deems suitable for his subordinates and impose them upon the individual. The style of management which Odiorne recommends as being more suitable to the concepts of Management-by-Objectives is Theory Y. A Theory Y manager assumes that people will work hard and be committed to their tasks; he will delegate authority and responsibility, will use a participative style of management, and will allocate resources to aid the subordinate in accomplishing his tasks.[19]

Resource Support System

The active commitment of the top administrator of an organizational unit to the concepts of MBO must be accompanied by a commitment of support from the resource support systems within the organization if MBO is to be successfully implemented. Odiorne,[20] in

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[18]Douglas McGregor, The Human Side of Enterprise, New York: McGraw-Hill Book Company, Inc., 1960.

[19]George Odiorne, MBO Guidebook, instructional aid utilized in MBO implementation seminars., p. 7.

[20]George Odiorne, Management by Objectives, A System of Managerial Leadership, New York, Pitman Pub. Co., 1965, pp. 57-59.

explaining the importance of the environment in which a manager operates, states that, "the values and goals of the organization in which the manager works invariably shape his behavior and are often the underlying reason for his success or failure."

A study conducted at Texas Instruments Incorporated concerning motivation and management pointed out that effective management systems are those which the individual manages as opposed to systems that manage the individual. An effective management system is one in which effective programs, practices, and sub-systems make possible accomplishment of both job and personal objectives within an organizational setting.[21] Connellan describes the need for sub-system support of an MBO program in the community college.

> Community colleges have a variety of sub-systems at work within the organization, each of which suggest that certain behaviors are appropriate and other behaviors are not appropriate. Some of these sub-systems are appraisals, promotions, salary administration, and freedom to work on interesting projects. Receiving the benefits is behaving in an appropriate way.
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> For example, if a faculty member is not only setting high standards for himself, but is meeting these standards, there has to be some sort of organizational system which rewards him for these efforts. This might take the form of a salary increase, the

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[21]Harold M. F. Rush, Behavioral Science Concepts and Management Application, New York: National Conference Board Studies in Personnel Policy, No. 216, 1969.

> opportunity to attend a conference, a promotion, or freedom to work on a special development project. Too often, however, this is not the case.[22]

Beck and Hillmar describe a system which is supportive of Management-by-Objectives as being:

1. understood by the user;
2. goal oriented;
3. controllable by the user;
4. adaptive to the user's needs;
5. capable of giving feedback to the user.[23]

Brady[24] expands on feedback and adaptability in his description of the MBO process at work in the HEW. Progress in meeting objectives is constantly monitored and facilitated by milestone charts prepared for each objective. Bi-monthly conferences with management heads of individual units within the HEW are held to review progress and to discuss changes inside or outside the agency which will affect its work. Objectives may be changed to conform to new iniatives, resulting in a dynamic rather than a static process. The ability to quickly change directions, abandon or alter objectives, and institute new objectives is critical to the success

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[22]Connellan, op. cit. pp. 16.

[23]A. C. Beck, Jr., and E. D. Hillmar (eds.) A Practical Approach to Organization Development through MBO, Menlo Park, Calif.: Addison-Wesley Pub. Co., 1972, p. 315.

[24]Brady, op. cit. pp. 69-71.

of the agency in meeting its overall goals.

Once it has been decided that a manager is to utilize the MBO technique, it is most important that the systems from which he draws support reinforce his attempts at using MBO. Schrieber and Sloan in a study of barriers to implementation of MBO have identified the crucial variable as,

> not the system itself, but the way in which the system operates, i.e., the climate for individual managerial development and for modification of existing practices and procedures.[25]

Among the components of the organizational system which Schrieber and Sloan identify as having importance in setting the organizational climate in reference to implementing MBO are:

1. The communication system -- the flow of information within the organization.
2. Staffing and workload -- the workload resulting from staffing levels and assigned responsibilities and the resulting commitment to tasks.
3. Long range planning -- the existence of a formal structure for determining the long range goals of the organization.

Carvalho, in describing a strategy for successful MBO installation makes the following points:

> The answer to efficient and effective MBO installation seems to lie, then, in concentration on renovating the organization and restructuring

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[25]David E. Schrieber and Stanley Sloan, "Management By Objectives," Personnel Administrator, 15 May-June 1970, pp. 20-26.

> the management information system. Managers need information in a form which will permit self evaluation of performance relative to objectives.... Also, the authority system must be restructured so that individual managers and supervisors can make decisions (within general policy limits) on how they are going to use the people, equipment, and so on, in their area of responsibility to achieve the results expected of them.[26]

Carvalho summarizes the implementation discussion by stressing that an organization's structure must be changed in such a way that results-oriented behaviors are positively reinforced and activities-oriented behaviors are negatively reinforced.

Fred Schuster,[27] in describing the need for the subsystems of an organization to be organized and operated in a manner supportive of the goals and objectives of the organization, defines two important subsystems of the human resources management process critical to the success of a MBO program. The first, the internal environment modification system, is composed of the following factors:

1. organizational climate
2. managerial style
3. organizational structure
4. policies and procedures

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[26]Carvalho, op cit. p. 27.

[27]Fred Schuster, "A Systems Approach to Managing Human Resources." The Personnel Administrator, 16 March-April, 1971, pp. 27-32.

5. reward system (compensation plans and non-financial rewards)

6. communication system (formal and informal as well as upwards and downwards structures)

7. fringe benefits system

8. the labor relations system.

The second subsystem, the individual development system, is composed of the following factors:

1. promotions

2. transfers

3. planned work experiences

4. establishing individual objectives and measures

5. counseling

6. formal training and development.

Both systems should operate concurrently within the organization to support the accomplishment of the organizational objectives. According to Kirchhoff,[28] to successfully implement MBO into a managerial setting, the compensation system should be reviewed to relate compensation to contribution and performance as revealed in the evaluation of objectives accomplishment. Decisions on merit increases and promotions must be made using performance relative to objectives as the main criteria.

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[28]Bruce A. Kirchhoff, "Using Objectives: The Critical Variable in Effective MBO," Michigan Business Review, Vol. 26, No. 1, Jan., 1974, p. 20.

MBO depends most heavily on operational budget allocation. Brady[29] describes the MBO cycle as beginning when a unit formulates its budget and makes the key resource and fund allocation decisions. Rouche explains that responsible resource allocation can begin when well-designed, rational, systematic programs have been conceived in sufficient detail.

> Program objectives at all levels within each department must be quantified so as to reveal necessary requirements to achieve the objectives. The budgeting process matches requirements to available resources and then apportions resources accordingly. An absolute commitment of resources is tied to immediate program objectives, while a planned commitment is linked to longer-range objectives.[30]

Summary of Related Literature and Its Significance to the Adoption of MBO

Successful implementation and utilization of MBO in an organization requires that the resource support systems of the organization be:

1. understood by the user;
2. goal oriented;
3. controllable by the user;
4. adaptive to the user's needs;
5. capable of giving feedback to the user.

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[29]Brady, Op. Cit. p. 68.

[30]Rouche, Op. Cit. p. 35.

The resource support systems available to a manager can be grouped into two basic sub-systems; financial resource systems and non-financial resource systems. Financial resource systems available to educational managers include salary administration and operational budget. Non-financial resource systems available to educational managers include personnel employment and staff workload assignment. The indicated resource support systems are considered to be key determinants of the successful implementation of MBO.

Review of Research

Very little research has been reported dealing directly with the management styles or resource support systems of administrators in community colleges. The research reported in this section of Chapter IV concerns MBO, community college support systems, and administrative styles and roles. The combination of research results leads to inferred conclusions concerning the utilization of MBO in the administration of occupational education in community colleges.

Management-by-Objectives

A study by Henri L. Tosi and Stephen Carroll[31] of the differential effects of MBO as perceived by managers

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[31]Henri L. Tosi and Stephen Carroll, "Some Factors Affecting the Success of Management By Objectives," Journal of Management Studies, Vol. 7, No. 2, May, 1970, pp. 209-223.

using it is one of the few studies in existence concerned with the results of MBO. The study examined results produced in terms of manager-subordinate relationships, satisfaction with MBO, increased effort, and goal success. One hundred and fifty managers in a large national corporation which had just implemented MBO were selected to receive mailed questionnaires. Replies were received from 134 managers; 129 of the replies contained usable data. The questionnaire contained fifty items which were grouped into subscales for analysis. Scores in each subscale were analyzed for correlation with one another.

The results of the study demonstrated that the amount of time a manager's boss spends on MBO is positively related to the manager's higher levels of satisfaction with MBO, (r=0.50) perceived goal successes, (r=0.20) and improved boss relations (r=0.26). It is negatively related to the manager's perceived effort increases (r=0.23). Frequent feedback is positively related to the perceived time a boss spends on MBO (r=0.65), the perceived level of support for MBO (r=0.55), psychological participation (r=0.27), satisfaction with the boss (r=0.53), and to boss involvement in tasks (r=0.53). Goal clarity for the manager relates positively to the time a boss spends on MBO (r=0.49), perceived organizational support (r=0.40), satisfaction with the

boss (r=0.36), and the manager's perceived level of psychological participation in the total job situation (r=0.26).

For managers with perceived low influence on the allocation of resources to achieve goals psychological participation is positively related to improvement in boss relations (r=0.41), but boss involvement is negatively related to goal success (r=0.22). For managers with high control over resource allocation, satisfaction with the boss is positively related to increased goal levels. A lack of control over resources means a manager must depend on his boss for goal achievement. Increased MBO participation results in a better relationship, however increased boss involvement in goal achievement is viewed as pressure. Control over resources results in higher goals being set by the managers.

The study results indicate that managers who need certainty or who are unsure of the environment tend to report improved relationships with their boss when they believe that the boss is extending efforts on MBO. Behavior supportive of MBO is more important for those in relatively more changing, uncertain positions and reinforces situations where goal priorities have been set. High participation is related to higher satisfaction with MBO for high initiative managers. But is has a far

greater positive effect for managers who have a high need for policy, low control over means of goal achievement, low job interest, and are not aware of their superior's goal priorities. The effect of participation is low for those who have low goal priorities. Increasing participation may simply increase ambiguity and uncertainty already existing. Involvement in task accomplishment by a manager's superior can be negative for those who might view it as a threat to change the status quo. It may be supportive for those highly interested in their job.

Tosi's and Carroll's study suggests that the application of MBO to a given situation must be done with care. Differences in individual managers and their particular situations require that different approaches be taken with each individual in applying the MBO technique. A blanket approach will likely result in some undesirable effects.

Heinz Weihrich[32] studied the integration of MBO into several key managerial activities in a large bank which had been employing the Management by Objectives approach for over two years. The study points out the need for top management support of MBO. Questionnaires were sent to 650 participants in the program; 278 usable

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[32]Heinz Weihrich "A Study of the Integration of Management by Objectives with Key Managerial Activities and the Relationship to Selected Effectiveness Measures" unpublished Doctoral Thesis, University of California, 1973).

returns were received. The respondents were asked to state the degree of importance of MBO in carrying out their managerial activities. They were also asked the same questions with reference to a program they would consider "ideal". Seven key managerial activities were considered more important than the others: (1) comparing actual performance with forecasts, schedules, objectives, or budgets; (2) setting of department or unit objectives; (3) setting of performance objectives by the respondents; (4) planning for one year or less (including preparation of expense budgets); (5) setting performance objectives for the subordinates of the respondents; (6) determining the activities necessary to achieve the objectives of the organization, department, or unit; (7) self development of the respondents.

The results of the study showed that the commitment to Management by Objectives by top management and by the superiors of the respondents was positively related to the integration of MBO with key managerial activities. The degree of the integration was also positively correlated with the effectiveness of MBO. The findings indicate that in a program which was considered "ideal," MBO should be more important in carrying out key managerial activities than in the existing program. Finally, differences between the integration of MBO with key managerial activities in the existing program and one which was considered "ideal" were negatively

correlated with satisfaction with and liking of the program.

The usefulness of MBO for public school administration was investigated by Bruce Altergott in a study which sought to adapt standard MBO approaches to those needed in a public school setting.[33] Altergott developed an MBO management system through a review of related literature and research, interviews with selected members of the School of Business, Indiana University, and interviews with selected management personnel in organizations which have had practical experience with MBO. The system was then reviewed by four juries for applicability to public education.

Altergott found that MBO would be of practical use in an educational institution in eight management areas: (1) individual motivation, (2) performance appraisal, (3) organizational planning, (4) coordination, (5) control, (6) individual development, (7) improvement of supervisory relationships, and (8) a total system of management. Altergott concluded that MBO is of utilitarian value to educational administration.

A study by Peter Vande Guchte demonstrates that MBO has useful applications in community college

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[33]Bruce H. Altergott "Management By Objectives for the Public Schools" (unpublished Doctoral thesis, Indiana University, 1970).

administration.[34] Vande Guchte investigated relationships between the use of MBO and the effectiveness of selected community college student personnel units. The perceptions of student personnel staff members and students regarding the effectiveness of the units were collected at eight community colleges in Michigan using two questionnaires developed for the study. The colleges were grouped according to MBO-use with two colleges in the full-use category, two in the partial-use category, and four in the no-use category. Seventy-five student personnel staff members and 268 students participated in the study.

The results of the questionnaire concerned with staff member perception of the effectiveness of the student personnel unit indicated that the full-use category had higher scores than the other two categories and was significantly different from the no-use category above the .05 level. Differences between the full-use and the partial-use categories and between the partial-use and no-use categories generally did not occur. The questionnaire concerned with student perception of student personnel unit effectiveness yielded no differences between any of the three categories. The

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[34]Peter Vande Guchte "A Study of Relationships Between the Use of Management-by-Objectives and Perceived Effectiveness in Selected Community Junior College Student Personnel Units" (unpublished Doctoral dissertation, Western Michigan University, 1973).

study demonstrates that community college staff members working in MBO controlled situations perceive their units to be more effective than do staff members working in non-MBO situations.

Community College Support Systems

Rarig's study of administrative practices in institutional long-range planning in community colleges points out the importance of coordinating planned objectives with planned support.[35] Rarig sought to: (1) discover the extent to which public community colleges are engaged in long-range planning, (2) determine what are the ingredients of long-range planning, and (3) discover how the colleges organize administratively to plan programs, facilities, finances, and other areas of concern. To secure information concerning community college planning, a one page checklist of long-range planning activities was sent to each community and junior college in the United States. Each college was asked to indicate those activities in which it was engaged. Additionally, interviews were held with selected community and junior

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[35]Emory W. Rarig "Administrative Practices in Institutional Long-Range Planning in Community and Junior Colleges" (unpublished Doctoral thesis, Columbia University, 1968).

college presidents and other administrators to determine how the colleges organized administratively to make long-range plans.

The conclusions of the study were:

(1) Many community colleges are actively engaged in long-range planning.

(2) The factors of long-range planning include: (a) philosophy and objectives, (b) programs, (c) administrative organization, (d) staff, (e) facilities, and (f) finance.

(3) Certain conditions for implementing the long-range planning process must exist: (a) a favorable climate for change, (b) support by the trustees and administrators, (c) centralized direction, (d) widest possible participation, (e) consideration of outside influences, (f) choice of priority goals, and (g) continuous evaluation.

(4) The basic pattern of organization for long-range planning is usually a single individual or a committee. For programs, the committee structure is almost universal. For facilities consultants, both individuals and committees are utilized. For financial planning the business manager and a committee are usually involved.

(5) Regional accreditation agencies and state-level agencies exert considerable influence on long-range planning activities.

A comprehensive investigation of how resource allocation is carried out in community colleges in Florida was made by George Corrick.[36] The study identified those who made decisions concerning operating budgets, the sequence of decision-making activity, the decision rules utilized, constraints on decision-making, information utilized in decision-making, and the variations and patterns of decision-making that took place in two community colleges. Data from interviews and record searches were compiled and summarized and provided the basis for the findings.

Corrick found that there was great similarity in both colleges in who was involved in the decision-making process. The president, chief business official, chief academic official, chief student affairs official and academic department heads participated in deciding resource allocation. Faculty participated through advising department heads. In allocation of funds for current expense and new personnel, roles were hierarchically ordered with decision activity flowing upward through organizational levels. In allocation of funds for salaries and fringe benefits, requests moved directly from recognized faculty organizations to participative forums involving administrative and faculty representatives.

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[36]George W. Corrick "A Field Study of Resource Allocation Systems in Two Community Junior Colleges" (unpublished Doctoral thesis,The University of Florida, 1970).

In both institutions the decision process began with projecting and estimating enrollments. Revenue estimates followed and heavily influenced later decision-making. Decisions regarding current expense and new personnel were made separately from decisions regarding salaries and benefits. In both colleges a general practice of accepting past levels of resource allocation as given with some expected annual increase seemed to prevail. Attention focused on margins between past and present allocations. In almost every instance acceptance of past allocations as the basis for present requests served as the major constraint in the decision-making process. Experience based judgment was more often identified as a decision criterion than any empirical or analytical information.

Corrick concluded that the colleges studied employed an incremental, or successive limited approximation theory budget method rather than a rational comprehensive theory model of budgeting. He suggested that more formal links were needed between information sources and resource allocation systems.

In 1970 Robenstine conducted a study to determine if the advent of collective bargaining in Michigan community colleges had an effect on resource

allocation in those colleges.[37] The study involved nine institutions and was conducted through a personal interview questionnaire developed by the researcher. The study concerned the differences in resource allocation between the years 1962-63 and 1968-69.

The findings of the study revealed that proportionately:

(1) Faculty salary schedules increased.

(2) Operating budgets (cost/cr. hr.) increased.

(3) Operating funds for plan operation decreased.

(4) Operating funds for ancillary services increased.

(5) Operating revenue from tuition decreased.

(6) Operating funds from local funds increased.

Robenstine concluded that collective bargaining has affected resource allocation with proportionately more resources being allocated to faculty salary schedules.

Administrative Styles and Roles

A study conducted by Donald Bivens[38] of school administration between the years of 1930 and 1955

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[37]James D. Robenstine "A Study of Operating Fund Allocation in Public Community Colleges" (unpublished Doctoral thesis, The University of Michigan, 1970).

[38]Donald R. Bivens "An Analysis of the Factors Affecting the Democratic Administration Concept" (unpublished Doctoral thesis, Indiana University, 1971).

concentrated on the degree of participation in decision-making afforded subordinate administrators. The study involved an extensive review of literature and interviews with several notable educationalists. Dr. George Counts, Dr. Robert Havighurst, Dr. Ronald Campbell, and Dr. Gordon MacKenzie participated in the interviews.

The study revealed that since the late 1920's school administration has moved toward a more participatory approach to educational leadership. The movement towards participation has steadily grown except for a period of time during World War II. During that period educational leadership was quite authoritarian. However, immediately following World War II educational administration once again became participatory. In the 1950's participation was considered an essential ingredient of educational leadership.

Duane Thompson conducted a study of the supervisory styles and self perceptions of 128 administrative and professional staff members in a state department of education.[39] To gather responses a written questionnaire, patterned after that used in a study by Meyers at Texas Instrument, Inc., was

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[39] Duane Thompson "Job Satisfaction in Administration: An Investigation of the Joint Effects of Supervisory Style and Subordinate Self Perception" (unpublished Doctoral thesis, University of Iowa, 1969).

administered to the population of administrators and staff members. The responses were grouped into subscales developed in the Meyers study and analyzed for content.

The findings of the study revealed that a supervisory style perceived by a subordinate as supportive of his needs was found to be associated with a higher level of subordinate job satisfaction. Another significant finding was that subordinates with a high level of favorable self perception were less likely to perceive the supervisory style of their superior as supportive. A subordinate with a lower level of favorable self perception was more likely to perceive the superior's supervisory style as supportive.

An interesting study of management styles utilized by community college administrators was conducted by Bender and Richardson in 1971.[40] Florida State University and the University of Florida jointly sponsored an institute for two-year college administrators. The institute was attended by sixty-four participants representing administrative teams from twenty different institutions; the teams were composed of college presidents, student personnel deans, instructional deans,

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[40]Louis Bender and Richard Richardson, Jr., "Management Concepts and Higher Education Administration" unpublished paper presented at Florida State University, May, 1972).

and business officers. As part of the institute, each administrator completed the Management Style Diagnosis Test developed by W. J. Reddin. The test yields an overall style profile and scores for task orientation, relationship orientation, effectiveness, and a style synthesis.

The results of the study show that 70% of the administrators taking the test had a high relationship orientation and a low task orientation. The predominant management styles exhibited by the administrators were of a low effectiveness type, more concerned with harmony among subordinates than with task completions. The remaining 30% of the respondents were dispersed almost equally over the other six categories of management styles. The styles varied from that with a low concern for both task and relationships and considered ineffective to that with a high concern for both task and relationship and considered highly effective.

When the management styles of the college administrators were compared with those of other groups of managers, it was found that the only other group to exhibit a preponderance of similar, less effective management styles was Research and Development Managers. The other comparison groups, Heads of Volunteer Agencies, Military Officers, and Presidents & Vice Presidents of Conglomerates, all exhibited more effective management

styles emphasizing both task and relationship orientation. The researchers concluded that one possible explanation for the high relationship, less effective styles exhibited by the two groups could be that both groups, college administrators and research directors, manage professionals who work independently. The other groups manage people to bring about specific products, and the efforts of all involved must be coordinated towards a given end. The results produced in education and research are far less tangible, thus task orientation is less likely to predominate.

A study by William Lynam[41] demonstrates that behavioral objectives are applicable to the role of an administrative dean in the community college. Lynam interviewed ten Michigan community college deans representing institutions of differing size and type to develop and refine a list of competencies needed by the deans in their functions of community college administration. Lynam defined an administrative competency as:

> The capacity to synthesize and actualize relevant knowledge for the purposes of: (a) facilitating institutional planning, (b) resolving complex problems which interfere

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[41]William Joseph Lynam "A Study of the Administrative Competencies Needed by the Community College Academic Dean and a Model of their Translation into Behavioral Statements Related to Administrative Training Experiences" (unpublished Doctoral thesis, Michigan State University, 1970).

with the achievement of organizational goals and objectives, and (c) evaluating institutional progress toward goal achievement.

The competencies which Lynam found to be the key concerns of the community college deans were:

1. Interpersonal Relations
2. Communication Systems
3. Personnel Management
4. Instructional Evaluation
5. Curriculum Development
6. Leadership Development
7. Professional Development
8. Budget Management
9. Presidential Cabinet
10. Administrator Interrelationship

In each competency area several specific behaviors were listed as appropriate abilities for the dean to possess. One of the primary conclusions of the study was that administrative competencies do exist, may be listed, and may be further described in statements of behavioral terminology and behavioral manifestations.

In 1971, Marvin Keller[42] conducted a study at the University of Florida which produced a profile of

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[42]Marvin K. Keller "The Evolving Role of the Chief Vocational Technical Administrator in Selected Florida Public Community Colleges" (unpublished Doctoral thesis, University of Florida, 1971).

roles for the chief vocational-technical administrator in Florida community colleges. The purpose of the study was to determine the present role of the chief vocational-technical administrator, to identify the critical tasks he performs, and to determine the role he will fulfill in the near future.

The study involved four community colleges in Florida with enrollments of 1,000 or more students in occupational education. Interviews were held with the chief vocational-technical administrator, his immediate superior, and his subordinates. The role of the chief administrator was investigated in reference to three areas of responsibility; (1) maintaining an interface between the vocational technical programs and the rest of the college, (2) long range planning, and (3) maintaining an interface between the vocational technical programs and agencies or groups outside the college.

The results of the study indicated that the chief administrators of vocational-technical education did not agree on the most critical task they perform in administration. Responses varied; coordination of reports, policy development, and intra-institutional liason work were given as the most important aspect of their functions. Community college presidents unanimously identified long-range planning as the most important function of the chief administrator of

vocational-technical education. Subordinates to the chief administrators unanimously identified the tasks of providing leadership in new program planning and implementation and expediting divisional policies and requests as the most important functions of the chief vocational-technical administrator.

As far as other functions are concerned, chief vocational-technical administrators rated program development, supervision, and evaluation as very important. Their superiors did not consider those tasks to be important at all. Their subordinates felt that in the area of curriculum development the proper role of the chief vocational-technical administrator was to provide resources, coordinate surveys, and review new and existing courses.

The study revealed extensive disparity between the perceptions of the chief vocational-technical administrators and their immediate superiors and subordinates as to the functions which make up the proper role of the chief vocational-technical administrator in Florida community colleges.

A study conducted by Komar in 1973 describes the position, qualifications of the position holder, and the problems associated with the position of Chief Administrator of Vocational-Technical Education in

two-year colleges in Michigan and in the United States.[43] The purpose of the study was to gather data upon which to base recommendations for criteria by which administrators are hired and curricula by which administrators are trained. The study also revealed the problems faced by chief vocational-technical administrators in the management of occupational education in two-year colleges.

The study included all of the chief administrators of vocational-technical education in Michigan and 118 others in a stratified sample of the two-year colleges in the United States. Of the 148 questionnaires mailed to the sample population, 118 were returned representing an 82 percent response. The results of the study indicate a significant variation in the backgrounds of the chief vocational-technical administrators, some similarity in the description of the positions they held, and some similarity in the descriptions of the problems they identified as being associated with their administrative roles.

The majority of the administrators held master's degrees; only 25 of the respondents held doctorates. Teaching experiences ranged from less than one year to

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[43]John J. Komar "The Qualifications, Positions, and Problems of Chief Administrators of Vocational-Technical Education in Public Two-Year Colleges in the United States, With Special Reference to Michigan" (unpublished Doctoral thesis, Michigan State University, 1973).

more than forty with a majority of the respondents having taught in a two-year college. Most respondents had worked in educational administration from one to nine years and had held their present position for four years or less. A majority of the administrators had no occupational experience in business or industry.

The positions held were mostly at the second level of administration with the administrator holding the title of Dean and reporting directly to the president of the college. Most of the respondents supervised three or fewer administrative subordinates and less than forty instructors. One-half of the respondents spent all of their working time in vocational education administration. Salaries of the respondents ranged from $10,000 to more than $25,000 with contracts ranging from nine months to twelve months.

The problems identified by the chief vocational-technical administrators fell into six main categories; finances, communication, community college administrative procedures, staffing, curriculum development, and state level vocational administration. Insufficient financial support for the administration of vocational technical education was the most common problem identified. Other problems dealing with finances included: lack of finances for programs, lack of finances for equipment, lack of finances for programs, and lack of finances for salaries.

One-third of the respondents in the study reported problems concerning communication with publics internal and external to the community college. Less than desirable rapport with prospective students, four year colleges, parents, high schools, business and industry, and the general public was reported. Significant communication problems internal to the community college included such problems as the lack of vocationally oriented administrators in the top positions in the community college, lack of acceptance by top administrators of career education concepts, lack of support for vocational technical education by top administrators, and conflicts of interest between the faculty and administration.

One-fourth of the respondents mentioned problems dealing with ineffective administrative procedures in the community college. Such problems were cited in: academic governance, administrative procedures, bureaucratic red tape, lack of autonomy for the administrator, and policies of higher ranking officials.

Problems concerned with staffing dealt primarily with inadequately trained instructors both in occupational and educational competencies. The problem of finding instructors in certain technical areas also occurred frequently. Other problems identified in staffing dealt mainly with concerns

about the lack of faculty iniative for excellence and leadership.

Twelve percent of the respondents reported problems with some aspect of curriculum development. The problems centered mostly around the lack of experienced program developers, unsuccessful programs, relevancy of programs to changing conditions in business and industry, and accreditation. The problems given by the administrators concerning state-level administration of vocational-technical education included areas such as funding priorities, bureaucratic red tape, state level reports, and certification requirements for instructors.

Komar concluded his study with recommendations that educational programs be established in universities to prepare vocational-technical administrators and that college and state level administrations take cognizance of the problems identified and change their procedures, etc. where necessary.

Summary of Related Research Findings and Their Significance to the Adoption of MBO

Tosi and Carroll identified several factors affecting the success of MBO. Top management support of the system and active commitment in implementing MBO activities seem to be primary factors of success. Managers with low control over resource allocation tend

to improve their relations with their superiors through MBO participation. Managers with a high need for policy, low control over means of accomplishment, low job interest, and a low awareness of their superiors' goal priorities increase in job performance and job satisfaction under MBO.

Weirich's study of the effects of MBO on managerial activities also indicates a need for commitment and support of top managers in implementing MBO. The study further emphasizes the value of MBO in determining resource allocation and achievement evaluation.

Altergott's study of the appropriateness of MBO to public education concludes that public education administration would benefit from utilization of MBO. The study by Vande Guchte extends Altergott's conclusion to the use of MBO in the management of education in community colleges.

Rarig's study of administrative long-range planning in community colleges points out the need to coordinate planned resource support with planned objectives. The study reinforces previous studies that MBO is appropriate for community college administration and supports the premise that the resource support system must be fully integrated into the MBO system.

Corrick's study of resource allocation systems in community colleges concludes that resources are not

presently being allocated in accordance with planned objectives. Rather, a static system of percentage increases in budget relative to percentage increases in enrollment prevails. The results of the study seem to indicate that present resource allocation systems in community colleges would need to be altered if MBO were to be implemented successfully.

The study by Robenstine demonstrates that the total resources available to Michigan community colleges has proportionately declined over the past several years. The study emphasizes that the effect of faculty collective bargaining has reduced the amount of resources available to the administrator to expend in a discretionary manner. Less funds are available to the administrator for allocation towards meeting planned objectives. The study points out the need for more sophisticated assessment of goals, goal priorities, and allocation of resource support in community college administration. The results of the study indicate a need for a management system like MBO.

Biven's study of public education administration concludes that since the 1930's educational administrators have increasingly adopted participative styles of management. Thompson's study reveals that the supervisory styles of educational administrators have distinct effects upon their subordinates. A

supervisory style deemed supportive by subordinates seems to result in higher levels of job satisfaction on the part of subordinates. The results of the two studies appear to support the administrators' increasing readiness to adopt a system such as MBO and the subordinates readiness to respond favorably to such a system. MBO requires both participation and support of subordinates.

However, the study conducted by Bender and Richardson describes the management styles employed by community college administrators as ineffective with focus placed primarily on interpersonal relations rather than task accomplishment. The findings cast doubt on the readiness of community college administrators to adopt a style of management conducive to successful implementation of MBO. It would appear that community college administrators will have to undergo special training to alter their management styles to incorporate more results orientation.

Lynam's study of Michigan community college academic deans demonstrates that the role of an administrator can be defined in terms of behavioral objectives. The findings seem to indicate that the tasks described in MBO literature as critical to the success of MBO are appropriate roles of an academic dean. Personnel management, budget management, and

evaluation are integral components of an MBO system and are identified as key concerns of community college academic deans.

The study of community college vocational-technical administrators by Keller reveals that large disparities exist between the perceptions of the administrators and their superiors and subordinates as to what the proper role of the vocational-technical administrators should be. The findings indicate a need for role clarification such as that purported by the literature to be a major benefit of MBO.

Komar's study of the characteristics of community college chief vocational-technical administrators identifies several key problem areas faced by the administrators in the management of occupational education. The problems concentrate in the areas of financial resource allocation, communication, administrative procedures, and personnel staffing. The main focus of the difficulties identified by the administrators is a lack of control of the systems. The results of the study appear to support the need for an assessment of the actual functioning of resource support systems prior to attempting the implementation of MBO.

The combined studies present a picture of community college administration which while evidencing

a strong need for results oriented management techniques, demonstrate that community college support systems and the administrators may not be fully prepared to adopt a system such as MBO.

CHAPTER III

METHODOLOGY

This chapter contains a review of the means by which the data concerning management styles and resource support systems of Michigan community college Occupational Deans were collected and analyzed. The topics of discussion are arranged in the approximate sequence in which the events occurred.

Population

The study included the entire population of thirty Occupational Deans in twenty-nine public, two-year community colleges identified in the Michigan Department of Education, Vocational Education and Career Development Service 1973-74 Directory of Vocational Administrators. See APPENDIX C. Each Occupational Dean was personally contacted by telephone or interview to secure his consent to participation in the study.

Development of the Instrument

The questionnaire utilized to collect the data for analysis consisted of two separate sections. The first section, Questionnaire "A", was developed from the George Odiorne, MBO Readiness Questionnaire. See APPENDIX D.

> "The MBO Readiness Questionnaire is a widely accepted instrument used extensively in management training seminars. The instrument measures a manager's orientation towards Theory X or Theory Y styles of management."[44]

The questionnaire was modified in wording where necessary to make the questions applicable to the community college setting, the instructions for completing the questionnaire were expanded to more adequately define those to whom the questionnaire items refer, and the mid-point in the response scale was altered from a mildly positive statement of agreement to a neutral statement of, "neither agree nor disagree." Care was taken to ensure that the intent of each questionnaire item was not changed. Questionnaire "A", Managerial Style Description, produced measurement of two factors:

1. The degree to which the management style employed by the respondent is appropriate for MBO.

2. The degree to which assumptions the respondent holds concerning the ability of subordinates to work under MBO will allow him to utilize MBO.

Questionnaire "A" contained twenty items in the form of statements to which the respondent indicated the degree of his agreement or disagreement with a particular statement by circling a number from one through five. Ten items were stated in a positive manner,

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[44]Statement by Dr. Michael Moore, Professor, College of Labor and Industrial Relations, Michigan State University, Personal Interview, October 9, 1973.

and ten items were stated in a negative manner. Analysis of data produced by the questionnaire was made by grouping the responses into two sub-categories, reversing the negative scores, and plotting the results according to instructions on two sub-scales. One sub-scale (S/J) indicated how the respondent perceived his subordinates managing their jobs; the other sub-scale (S/S) indicated how the respondent perceived himself managing his own job.

The second section of the study instrument, Questionnaire "B", was developed by the researcher and was based upon extensive readings as to which factors in a management system are influential in affecting the successful implementation of MBO. The systems chosen for investigation in this study include the following financial resource support systems:

1. Salary administration
2. Operational budget

The non-financial resource support systems chosen for inclusion in the study were:

1. Personnel employment
2. Staff workload assignment

It was recognized that the systems are not mutually exclusive and that a certain degree of interdependence is inevitable. However, for the purposes of the study, (description of the resource support systems as they pertain to successful utilization of MBO), it was felt

that the chosen systems were the key determinants of successful utilization of MBO. It was also determined that the chosen systems would serve as an adequate description of the resource support systems typically available to Occupational Deans in Michigan community colleges.[45]

Questionnaire "B", Resource Support Systems Description, produced measurement of four factors:

1. The extent to which the resource support systems are supportive of goal achievement in the occupational programs.

2. The extent to which the resource support systems are adaptable to changing needs in the occupational programs.

3. The extent to which the resource support systems are controllable by the Occupational Dean.

4. The extent to which the resource support systems provide feedback information to the Occupational Dean.

Questionnaire "B" was composed of thirty-two items arranged in random order. Each item was in the

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[45]Panel of Experts:

Dr. John Shanahan, Supervisor, Post Secondary Unit, Michigan Department of Education, Vocational Education and Career Development Service.

Mr. James Person, Chairman, Department of Management and Marketing, Lansing Community College.

Mr. Harris Dean, Professor, Department of Management and Marketing, Lansing Community College.

Dr. Fred Ignatovich, Professor, Department of Higher Education Administration, School of Education, Michigan State University.

form of a statement concerning the administration of occupational education. The respondent indicated the extent to which each statement is true of his particular situation by placing an X on a continuum ranging from Never True to Always True. Eight statements pertained to each resource support system selected for inclusion in the study. Each resource support system was examined for all four factors identified above with two statements pertaining to each factor of each resource support system. Twelve items were stated in the negative form and twenty in the positive form.

Analysis of data produced by the questionnaire was made by grouping the responses into appropriate sub-categories, reversing the negative scores, and plotting the results on sub-scales corresponding to the four factors and the four resource support systems.

The study instrument (both Questionnaires "A" and "B") was submitted to a panel of experts in the fields of community college and management[46] for review of the instrument's face validity and suitability to the intended population. The panel's recommendations were carefully reviewed and appropriate changes to the instrument were made. The second submission of the instrument to the panel of experts produced a consensus opinion the instrument possessed acceptable face validity.

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[46]Panel of Experts, Op. Cit.

Pilot Study of the Instrument

A pilot study was undertaken to test the instrument for data analysis and suitability for its intended purposes. A sample of occupational administrators representative of community college Occupational Deans was chosen for the pilot study population. The sample included occupational education administrators who functioned in roles similar to that of an Occupational Dean.[47]

Each pilot study member was contacted personally to secure his participation in the pilot study. He was then mailed a letter of explanation, study instrument, and addressed, stamped, return envelope. Each participant was asked to respond to the instrument and

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[47]Pilot Study Population:

Dr. Ronald Edwards, Chairman, Department of Accounting and Office Education, Lansing Community College,

Mr. Edwin Bergmann, Chairman, Department of Engineering Technology, Lansing Community College,

Mr. Michael Lenkowski, Chairman, Department of Health Careers, Lansing Community College,

Mr. Harold Walper, Chairman, Department of Applied Technology, Lansing Community College,

Mr. George Hopkins, Dean, Division of Business Education, Lansing Community College,

Mr. James Person, Chairman, Department of Management and Marketing, Lansing Community College,

Mr. Eugene Bychinski, Dean, School of Technical and Applied Arts, Ferris State College.

then review the instrument for suitability in measuring post-secondary occupational education administration management styles and resource support systems as they pertain to MBO.

Responses were received from 100 percent of the pilot study population. The results of the pilot study indicated that the instrument was appropriate for the intended population, adequately measured the intended factors, and produced data in a form suitable for analysis. No changes were recommended in the instrument.

Collection of Data

The final instrument and cover letter were typed with Courier type face and reproduced by Xerox method. See APPENDICES A and B. The cover letter was typed on stationary bearing the letterhead of Lansing Community College and was signed by the writer. On February 15, 1974, the study was presented at a meeting of the Michigan Occupational Deans Administrative Council, a group composed of the Occupational Deans of Michigan community colleges. Twenty-one of the thirty Occupational Deans included in the study were present. The writer explained the purpose of the study and secured a commitment to participate from the Occupational Deans present. During a period from February 18 to February 26, the writer contacted the remaining nine Occupational Deans by telephone and secured the deans' agreement to participate in the study.

On February 28, 1974 the first mailing went out to the participants in the study. The envelope addressed to each Occupational Dean contained a cover letter, questionnaires "A" and "B", and an addressed, stamped, return envelope. By March 15, fifteen completed returns had been received. Follow-up telephone calls were made to each of the non-respondents and a second mailing took place March 16. By March 29, twenty returned questionnaires had been received. A second telephone follow-up was made to the remaining non-respondents, and a third mailing took place on April 1. By April 20, twenty-eight completed questionnaires had been received. On April 21, telephone calls were made to the secretaries of the remaining two non-respondents to secure their assistance in completing the study. On April 29, the last of the completed questionnaires was received marking a 100 percent return.

To gather data concerning the size and organizational structure of the occupational programs in Michigan community colleges, the writer sought the assistance of the Michigan State Department of Education. From reviews of submitted reports and interviews with the supervisor of post-secondary education in the Vocational Education and Career Development Service, it was determined that the organizational structures in which Occupational Deans functioned in their respective community colleges could be grouped into three categories.

The first category included Occupational Deans who are at the third level of management and report to an Academic Dean, who, in turn, reports to the President. The second category included Occupational Deans at the second level of management who simultaneously function as both the Occupational Dean and the Academic Dean and report to the President. The third category included Occupational Deans at the second level of management who report to the President and occupy positions equal in level to other deans in their colleges. The organizational structure in operation at each community college was reviewed from information reported by each community college on the Michigan State Department of Education form VE-4003, Application for Full-Time Vocational-Technical Administrators. The category of organizational structure appropriate to each Occupational Dean was determined and recorded.[48] See APPENDIX C.

The size of each community college occupational education program was determined by an analysis of information reported by each community college in the Michigan State Department of Education Annual Report of Total Vocational Education Enrollment, report number XO305 for school year 72-73. The report included Full-Year Equated enrollments in vocational-technical education,

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[48]Statement by Dr. John Shanahan, Supervisor, VECDS Post Secondary Unit, Personal Interview, March 21, 1974.

business education, health education, and liberal arts education where it was related strongly to vocational education. See APPENDIX C.

Data Tabulation and Analysis

Data from the returned questionnaires was recorded on a prepared tabulation instrument. See APPENDIX E. The score for each item on Questionnaire "A" was recorded adjacent to the corresponding item number on the tabulation instrument. Scores for items on Questionnaire "B" had to be translated from a location on a continuum to a numerical value. Never True was taken to equal 0, and Always True was taken to equal 100. A check mark on a division line was taken to equal a numerical value equal to the percentage figure shown; a check mark between division lines was taken to equal a numerical value to the nearest ten. A check mark between Never True and 10% was taken to equal a score of 5, and a check mark between 90% and Always True was taken to equal a score of 95. Items marked with an asterisk were stated in a negative form on Questionnaire "B", thus the score produced was reversed. A score of 95 was recorded as 5 for items marked with the asterisk.

A data tabulation instrument was completed for each returned questionnaire. The coded number representing the identity of each college Occupational

Dean was recorded along with data concerning the organizational structure and size of the community college. The scores taken from the returned questionnaires were recorded according to the above described procedures. The information from the data tabulation instruments was then transferred to IBM keypunched cards for data analysis.

Data analysis was made utilizing prepared data processing programs to produce mean scores, modes, and standard deviations for all items on Questionnaire "A" and "B". Responses were categorized by the independent variables of organizational structure and size, and data analysis was made of scores for means, modes, and standard deviations for each resource support system, and MBO success factor for both the entire population and for the categorized sub-scales of size and organizational structure. Analysis of correlations between the factors of organizational structure and size and the factors of managerial style and resource support system MBO success factors was made. A final analysis of the results of the study was made by plotting the resultant scores of the questionnaires on a theoretically perfect profile representing the highest degree of readiness to utilize MBO. See APPENDIX F, Scoring and Analysis Instructions.

CHAPTER IV

RESULTS OF THE STUDY

Chapter IV presents the findings of the study. Results are presented in tabular form accompanied by descriptions of the components of the presented tables. The findings are organized and presented in the following order: (1) tables dealing with population scores on the instrument subscales, (2) tables dealing with correlations between factors in the study, (3) tables dealing with the reliability of the instruments, and (4) figures summarizing the results of the questionnaires in terms of readiness to utilize MBO. A copy of each table and figure presented in Chapter IV can also be found in APPENDIX G.

College Size. College size ranged from a minimum of 147 to a maximum of 11,976 Full-Year-Equated-Students. The size category parameters were chosen to allow an equal (approximate) distribution of colleges in each category. Category I ranged from 147 to 990 FYES. Category II ranged from 1035 to 1693 FYES. Category III ranged from 2213 to 3466 FYES, and Category IV ranged from 5368 to 11,976 FYES.

Table 1. Distribution of respondents by category of college size.

Category	Size*	Number of Respondents	Per Cent of Total
I	0000-1000	9	30.00
II	1001-2000	7	23.33
III	2001-5000	7	23.33
IV	5001 or more	7	23.33
Totals		30	100.00

*Size equals the number of Full-Year-Equated-Students enrolled in occupational programs at the community college during school year 1972-1973.

Organizational Structure. Eleven community colleges operate with the Occupational Dean reporting to an Academic Dean who, in turn, reports to the President of the college. Five community colleges operate with one person acting as both the Occupational Dean and the Academic Dean and reporting directly to the President. Fourteen community colleges operate with several deans, one in each major area of educational programs, reporting directly to the President of the college.

Table 2. Distribution of respondents by category of organizational structure.

Category	Structure*	Number of Respondents	Per Cent of Total
I	OD-AD-Pres	11	36.67
II	(OD/AD)-Pres.	5	16.67
III	OD -- BD -- LAD -	14	46.67
Totals		30	100.00

*Structure indicates the organizational hierarchy in existence at the community college. OD = Occupational Dean, AD = Academic Dean, Pres. = President, BD = Business Dean, LAD = Liberal Arts Dean.

Questionnaire Subscale Responses

Questionnaire Subscale Item Response. The mean scores and standard deviations for each item associated with each of the subscales contained within Questionnaires "A" and "B" are given below. The scores represent the average responses for each item of the questionnaires from the entire population of Occupational Deans in Michigan community colleges. The questionnaire items are grouped according to the subscale to which they belong. Each item in Questionnaire "B" is listed under two separate subscales; an MBO success factor subscale and a resource support system subscale.

Table 3. Questionnaire item response by questionnaire subscale.

Item	Mean Score	Std. Dev.	Item	Mean Score	Std. Dev.
Questionnaire "A", Subscale -J- Subordinates' Management Methodology					
1.	4.27	.73	2.	4.23	.72
5.	3.97	.82	7.	4.06	.76
8.	3.23	1.19	10.	4.56	.55
11.	4.52	.54	14.	4.47	.50
15.	3.46	1.15	16.	2.63	1.09
Questionnaire "A" Subscale -S- Managers' Management Methodology					
3.	3.70	1.08	4.	1.70	.77
6.	3.33	.70	9.	4.43	.90
12.	2.72	.96	13.	2.19	1.15
17.	2.82	1.01	18.	2.63	.76
19.	4.03	.50	20.	3.63	1.12
Questionnaire "B", Subscale - Salary Administration System					
2.	87.50	26.14	11.	20.83	35.45
13.	17.32	28.80	19.	96.16	3.74
24.	21.99	33.38	28.	13.16	22.60
31.	40.99	43.55	32.	15.17	26.79
Questionnaire "B", Subscale - Operational Budget System					
1.	32.82	25.29	10.	84.84	23.46
18.	70.33	32.55	20.	71.62	27.85
22.	66.50	27.53	23.	67.66	25.79
25.	68.17	31.81	26.	80.83	20.70

Table 3 (cont'd.)

Item	Mean Score	Std. Dev.	Item	Mean Score	Std. Dev.
Questionnaire "B", Subscale - Personnel Employment System					
3.	94.33	8.72	5.	76.83	21.25
6.	78.17	27.26	7.	40.16	33.61
16.	77.50	30.79	17.	89.99	16.28
21.	70.16	29.42	29.	31.66	35.60
Questionnaire "B", Subscale - Staff Workload Assignment System					
4.	72.16	28.95	8.	75.99	19.58
9.	87.50	12.44	12.	68.17	34.27
14.	67.17	24.12	15.	79.99	31.14
27.	44.17	31.51	30.	81.67	22.89
Questionnaire "B", Subscale - Resource System Goal Orientation					
6.	78.17	27.26	8.	75.99	19.58
11.	20.83	35.45	14.	67.17	24.12
18.	70.33	32.55	20.	71.62	27.85
21.	70.16	29.42	24.	21.99	33.38
Questionnaire "B", Subscale - Resource System Control					
5.	76.83	21.25	12.	68.17	34.27
13.	17.32	28.80	15.	79.99	31.14
16.	77.50	30.79	23.	67.66	25.79
26.	80.83	20.70	31.	40.99	43.55

Table 3 (cont'd.)

Item	Mean Score	Std. Dev.	Item	Mean Score	Std. Dev.
Questionnaire "B", Subscale Resource System Adaptability					
1.	32.82	25.29	4.	72.16	28.95
7.	40.16	33.61	22.	66.50	27.53
27.	44.17	31.51	28.	13.16	22.60
29.	31.66	35.60	32.	15.17	26.79
Questionnaire "B", Subscale - Resource System Feedback					
2.	87.50	26.14	3.	94.33	8.72
9.	87.50	12.44	10.	84.84	23.46
17.	89.99	16.28	19.	96.16	3.74
25.	68.17	31.81	30.	81.67	22.89

Subordinates' Management Methodology. The S/J subscale is a measurement of the manager's perception of how his subordinates manage their own jobs. The questionnaire items are structured such that a maximum score of 50 is possible. Scores greater than 30 are considered desirable. No respondents scored less than 30. The minimum score achieved was 33; the maximum score was 46. Forty percent of the respondents scored above 39.

Table 4. Distribution of total scores for Questionnaire "A" Subscale S/J, Perception of Subordinates' Management Methodology.

Actual Score	Number of Respondents	Per Cent of Total
33	1	3.33
35	3	10.00
36	2	6.67
37	2	6.67
38	4	13.33
39	6	20.00
41	2	6.67
42	3	10.00
43	3	10.00
44	1	3.33
45	1	3.33
46	2	6.67
Totals	30	100.00

Mode Score = 39, Mean Score = 39.7, Standard Deviation = 3.4

Managers' Management Methodology. The S/S subscale is a measurement of the manager's perception of how he manages his own job. The questionnaire items are structured such that a maximum score of 50 is possible.

Scores greater than 30 are considered desirable and indicate a management style supportive of MBO. Seventeen Occupational Deans (approximately 57%) scored above 30.

Table 5. Distribution of total scores for Questionnaire "A" Subscale S/S, Perception of Managers' Management Methodology.

Actual Score	Number of Respondents	Per Cent of Total
20	1	3.33
24	2	6.67
26	1	3.33
27	1	3.33
28	2	6.67
29	2	2.67
30	4	13.33
31	4	13.33
32	4	13.33
33	5	16.67
35	2	6.67
37	1	3.33
39	1	3.33
Totals	30	100.00

Mode Score = 33, Mean Score = 30.6, Standard Deviation = 3.9

Salary Administration System. The total maximum score possible on each subscale in Questionnaire "B" is 800. A score of 400 or more is considered desirable and indicates a higher degree of readiness to accomodate and reinforce MBO. The scale measuring the readiness of the salary administration systems produced the results shown in Table 6. Eighty percent of the Occupational Deans obtained a score of less than 400. The maximum score was 710; the minimum score was 130.

Table 6. Distribution of total scores for Questionnaire "B" Subscale - Salary Administration

Score Range	Number of Respondents	Per Cent of Total
101 - 200	5	16.67
201 - 300	16	53.33
301 - 400	3	10.00
401 - 500	0	0.00
501 - 600	3	10.00
601 - 700	2	6.67
701 - 800	1	3.33
Totals	30	100.00

Mode Score = 220, Mean Score = 313.2, Standard Deviation = 156.7

Operational Budget System. Ninety percent of the Occupational Deans scored above the 400 level on the scale measuring the readiness of the operational budget systems to support MBO. One respondent scored less than 200, and two respondents scored higher than 700. The maximum score was 715; the minimum score was 145.

Table 7. Distribution of total scores for Questionnaire "B" Subscale - Operational Budget

Score Range	Number of Respondents	Per Cent of Total
101 - 200	1	3.33
201 - 300	0	0.00
301 - 400	2	6.67
401 - 500	7	23.33
501 - 600	11	36.67
601 - 700	7	23.33
701 - 800	2	6.66
Totals	30	100.00

Mode Score = 600, Mean Score = 542.3, Standard Deviation = 130.8

Personnel Employment System. Over ninety-three percent of the Occupational Deans scored above the 400 mark on the personnel employment subscale of Questionnaire

"B". Two respondents scored less than 400, and two respondents scored more than 700. The maximum score was 770; the minimum score was 310.

Table 8. Distribution of total scores for Questionnaire "B" Subscale - Personnel Employment

Score Range	Number of Respondents	Per Cent of Total
101 - 200	0	0.00
201 - 300	0	0.00
301 - 400	2	6.67
401 - 500	8	26.67
501 - 600	8	26.67
601 - 700	10	33.33
701 - 800	2	6.67
Totals	30	100.00

Mode Score = 535, Mean Score = 558.8, Standard Deviation = 107.3

Staff Workload Assignment System. Over ninety-six percent of the respondents scored at the 400 level or above. Ten percent of the Occupational Deans scored above 700. The maximum score was 750; the minimum score was 370.

Table 9. Distribution of total scores for Questionnaire "B" Subscale - Staff Workload Assignment

Score Range	Number of Respondents	Per Cent of Total
101 - 200	0	0.00
201 - 300	0	0.00
301 - 400	2	6.67
401 - 500	7	23.33
501 - 600	9	30.00
601 - 700	9	30.00
701 - 800	3	10.00
Totals	30	100.00

Mode Score = 690, Mean Score = 576.8, Standard Deviation = 111.9

Resource Support Systems Goal Orientation.

A maximum score of 800 was possible in each of the subscales of Questionnaire "B" dealing with the characteristics of the resource support systems studied. A score of 400 or more on each scale is considered desirable, indicating that in fifty percent or more of the instances the resource support system operated in a manner supportive of MBO. The scale measuring the goal orientation of the resource support systems produced the results shown in Table 9. Eighty percent of the

Occupational Deans scored at the 400 level or above. Ten percent of the respondents scored less than 300, and over six percent of the respondents scored over 700. The maximum score produced was 780; the minimum score was 250.

Table 10. Distribution of total scores for Questionnaire "B" Subscale - Goal Orientation

Score Range	Number of Respondents	Per Cent of Total
101 - 200	0	0.00
201 - 300	3	10.00
301 - 400	4	13.33
401 - 500	11	36.67
501 - 600	7	23.33
601 - 700	3	10.00
700 - 800	2	6.67
Totals	30	100.00

Mode Score = 410, Mean Score = 475.8, Standard Deviation = 129.2

Resource Support Systems Control. Approximately seventy-seven percent of the Occupational Deans scored above the 400 level. Two respondents scored below the 300 level and three respondents scored above the 700

level. The maximum score achieved on the subscale measuring the amount of control a dean exercises over the resource support systems studied was 780; the minimum score was 110.

Table 11. Distribution of total scores for Questionnaire "B" Subscale - Control

Score Range	Number of Respondents	Per Cent of Total
101 - 200	1	3.33
201 - 300	1	3.33
301 - 400	5	16.67
401 - 500	8	26.67
501 - 600	8	26.67
601 - 700	4	13.33
701 - 800	3	10.00
Totals	30	100.00

Mode Score = 470, Mean Score = 509.3, Standard Deviation = 150.9

Resource Support Systems Adaptability. Thirty percent of the Occupational Deans scored above the 400 level on the scale indicating the level of adaptability of the resource support systems. Thirteen respondents

scored below the 300 level; no respondents scored above the 700 level. The maximum score attained was 630. The minimum score was 60.

Table 12. Distribution of total scores for Questionnaire "B" Subscale - Adaptability

Score Range	Number of Respondents	Per Cent of Total
001 - 100	1	3.33
101 - 200	7	23.33
201 - 300	5	16.67
301 - 400	8	26.67
401 - 500	7	23.33
501 - 600	1	3.33
601 - 700	1	3.33
701 - 800	0	0.00
Totals	30	100.00

Mode Score = 455, Mean Score = 315.8, Standard Deviation = 130.3

Resource Support Systems Feedback. One-hundred percent of the Occupational Deans scored above the 400 level on the scale indicating the extent to which the resource support systems provide feedback to the user. No respondents scored below the 500 level. Fifteen

respondents scored above the 700 level. The minimum score produced was 580. The maximum score was 800, the highest score possible.

Table 13. Distribution of total scores for Questionnaire "B" Subscale - Feedback

Score Range	Number of Respondents	Per Cent of Total
101 - 200	0	0.00
201 - 300	0	0.00
301 - 400	0	0.00
401 - 500	0	0.00
501 - 600	3	10.00
601 - 700	12	40.00
701 - 800	15	50.00
Totals	30	100.00

Mode Score = 625, Mean Score = 690.2, Standard Deviation = 63.5

Management Styles and Resource Support Systems.

Table 13 displays the mean scores and standard deviations for each of the subscales of the data gathering instruments. The scores are the means for the entire population of Occupational Deans in Michigan community colleges.

Table 14. Mean Scores and Standard Deviations for all Subscales of Questionnaires "A" and "B"

Subscale	Maximum Score	Mean Score	Standard Deviation
Subordinates' Management Methodology	50	31.7	3.4
Managers' Management Methodology	50	30.6	3.9
Salary Administration System	800	313.2	156.7
Operational Budget System	800	542.3	130.8
Personnel Employment System	800	558.8	107.3
Staff Workload Assignment System	800	576.8	111.9
Goal Orientation of Resource Systems	800	475.8	129.2
Control of Resource Systems	800	509.3	150.9
Adaptability of Resource Systems	800	315.8	130.3
Feedback Provisions of Resource Systems	800	690.2	63.5

Relationship of College Size and Organizational Structure to Questionnaire Responses

The responses to the questionnaires were categorized by college size and organizational structure. The results for each subscale of Questionnaires "A" and "B" were compiled as shown in Tables 15 and 16. The correlation of college size and organizational structure to subscale scores is shown in Table 17.

College Size. The mean score for each subscale is given in Table 15 for the total number of respondents in a given category of college size. The number of respondents in each size category is given under the heading, No. of Resp. The standard deviation produced for each subscale is given below the mean score. At the bottom of the table the mean score for each subscale attained by the entire population is given. In no instances were mean scores produced by category of college size found to be significantly different from mean scores produced by the entire population.

Organizational Structure. Table 16 displays the mean scores and standard deviations for the total number of respondents in each category of organizational structure. Also given are the numbers of respondents in each category and the mean scores produced by the total population. No mean scores for subscales by category of organizational structure were found to be significantly different from population mean scores.

Table 15. Mean Scores and Standard Deviations for all Subscales of Questionnaires "A" and "B" by Category of College Size

College Size	No. of Resp.		Subscales									
			SUB MGMT	MGR MGMT	SAL ADMN	OPER BDGT	PERS EMPL	WORK ASGN	GOAL ORNT	CONT	ADPT	FDBK
0001 to 1000	9	M. Score	38.1	30.6	271.1	588.9	603.3	614.4	513.3	561.1	356.7	647.8
		Std. Dev.	3.4	1.5	170.0	117.5	96.8	91.4	113.7	135.3	116.2	71.6
1001 to 2000	7	M. Score	40.4	29.9	334.3	540.0	571.4	515.7	454.3	492.9	308.6	705.7
		Std. Dev.	3.9	4.6	174.6	101.0	79.0	123.8	153.3	127.8	105.3	66.5
2001 to 5000	7	M. Score	40.4	32.3	348.6	570.0	537.1	580.0	465.7	557.1	307.1	707.1
		Std. Dev.	4.2	4.1	179.6	119.9	89.0	134.9	140.8	141.6	136.3	57.1
5000 or More	7	M. Score	39.1	29.7	302.9	445.7	500.0	577.1	451.4	405.7	268.6	702.9
		Std. Dev.	2.2	5.3	111.5	159.1	147.5	97.9	131.5	170.8	170.8	40.7
Mean Score for all Respondents			39.7	30.6	313.2	542.3	558.8	576.8	475.8	509.3	315.8	690.2

Table 16. Mean Scores and Standard Deviations for all Subscales of Questionnaires "A" and "B" by Category of Organizational Structure

Organizational Structure	No. Resp.		Subscales									
			SUB MGMT	MGR MGMT	SAL ADMN	OPER BDGT	PERS EMPL	WORK ASGN	GOAL ORNT	CONT	ADPT	FDBK
I - OD AD PRES	11	M. Score	39.7	28.6	299.1	470.0	499.1	539.1	425.5	440.9	273.6	671.8
		Std. Dev.	3.9	4.2	147.6	103.0	98.2	110.6	150.6	114.8	118.0	61.0
II - (OD/AD) PRES	5	M. Score	39.6	31.0	300.0	598.0	550.0	614.0	502.0	602.0	308.0	650.0
		Std. Dev.	3.5	2.7	198.4	115.6	90.6	72.3	95.5	169.3	116.5	87.2
III - OD-BD-LAD PRES	14	M. Score	39.5	30.6	325.0	573.6	603.6	588.6	502.1	527.1	346.4	714.3
		Std. Dev.	3.5	3.9	156.6	139.8	107.8	123.0	118.8	154.8	143.1	48.5
Mean Score for all Respondents			39.7	30.6	313.2	542.3	558.8	576.8	475.8	509.3	315.8	690.2

Correlations. The correlations between the subscale scores and the categories of college size and organizational structure are given in Table 17. Of the ten subscales, college size correlated negatively with eight. The two subscales with which college size correlated positively were Salary Administration and Feedback. The only subscale which correlated with college size at the .05 level was Personnel Employment. Of the ten subscales, organizational structure correlated positively with nine; Subordinates' Management Methodology correlated negatively. Two subscales correlated with organizational structure at the .05 level, Managers' Management Methodology and Personnel Employment.

Table 18 indicates the correlations existing between the subscales on Questionnaire "A" and those on Questionnaire "B". Significant correlations were found to exist between the subscales of Subordinates' Management Methodology and Adaptability of Resource Support Systems. Significant and positive correlations were found between the subscale of Managers' Management Methodology and the subscales of Operational Budget, Personnel Employment, Staff Workload Assignment, Control of Resources, and Provision of Feedback.

Table 17. Correlation of Subscale Scores with College Size and Organizational Structure.

	SUB MGMT	MGR MGMT	SAL ADMN	OPER BDGT	PERS EMPL	WORK ASGN	GOAL ORNT	CONT	ADPT	FDBK
College Size	-.071	-.002	.100	-.351	-.367*	-.076	-.168	-.309	-.239	.333
Organizational Structure	-.030	.395*	.074	.348	.442*	.195	.271	.253	.256	.311

*Significant at the .05 level.

Table 18. Correlation of Questionnaire "A" Subscales with Questionnaire "B" Subscales.

	Questionnaire "B"							
	SAL ADMN	OPER BDGT	PERS EMPL	WORK ASGN	GOAL ORNT	CONT	ADPT	FDBK
Questionnaire "A"								
SUBORDINATES' MANAGEMENT METHODOLOGY	.101	.266	.286	.186	.147	.164	.497*	-.093
MANAGERS' MANAGEMENT METHODOLOGY	.136	.485*	.560*	.401*	.288	.553*	.312	.445*

*Significant at the .05 level.

Reliability of the Instrument

Each subscale of both Questionnaires "A" and "B" was divided into two equal numbers of paired questionnaire items. The split halves of each subscale were then compared for internal consistency utilizing the Split-Half Correlation method. The values produced for the correlations were corrected with the Spearman-Brown Correction Coefficient. Table 19 gives the correlation coefficient for each subscale.

Table 19. Split-Half Correlations of Questionnaire Subscales

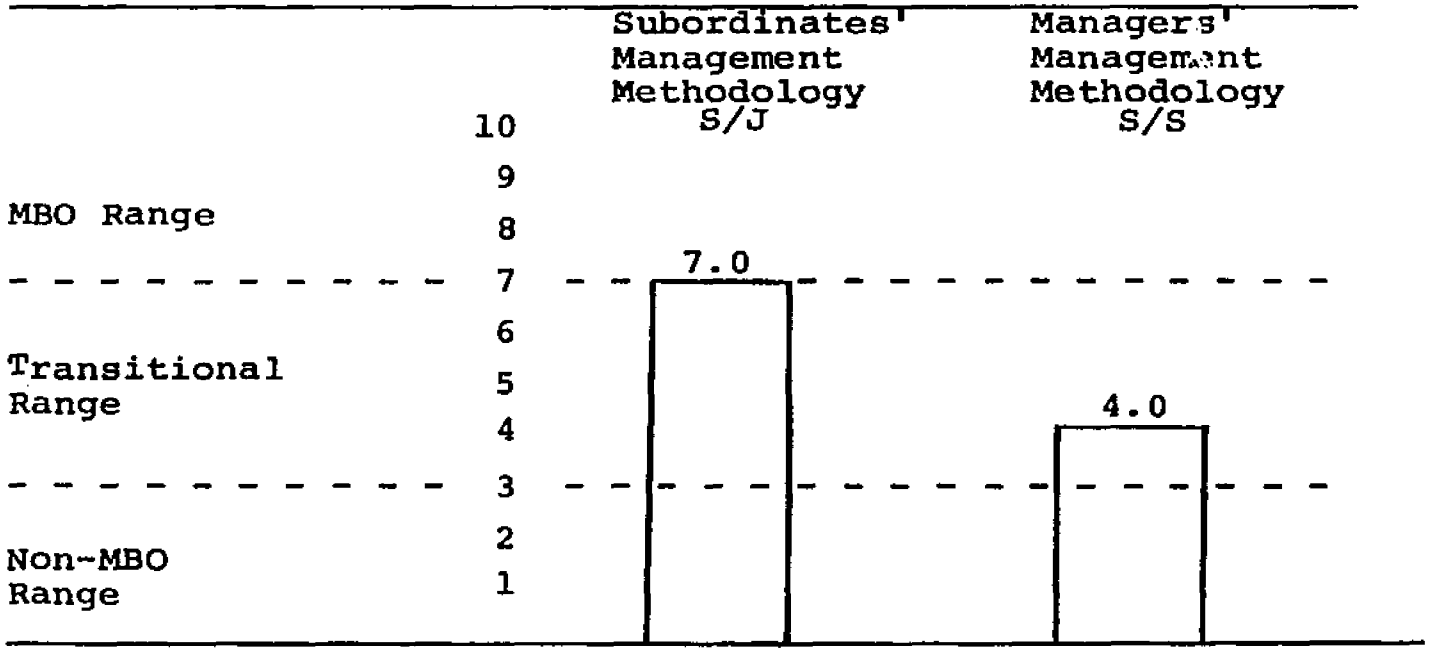
Questionnaire Subscale	Correlation Coefficient
Subordinates' Management Methodology	.5639
Managers' Management Methodology	.6464
Salary Administration System	.8853
Operational Budget System	.6204
Personnel Employment System	.6565
Staff Workload Assignment System	.5455
Resource System Goal Orientation	.8726
Resource System Control	.7019
Resource System Adaptability	.7434
Resource System Feedback	.1879

MBO Readiness

Management Style. Figure 1. indicates the results obtained from the analysis of data generated by the responses of the entire population of Occupational Deans to the items in Questionnaire "A". The scored position on each scale of the Readiness Profile was determined according to the procedures outlined in APPENDIX F.

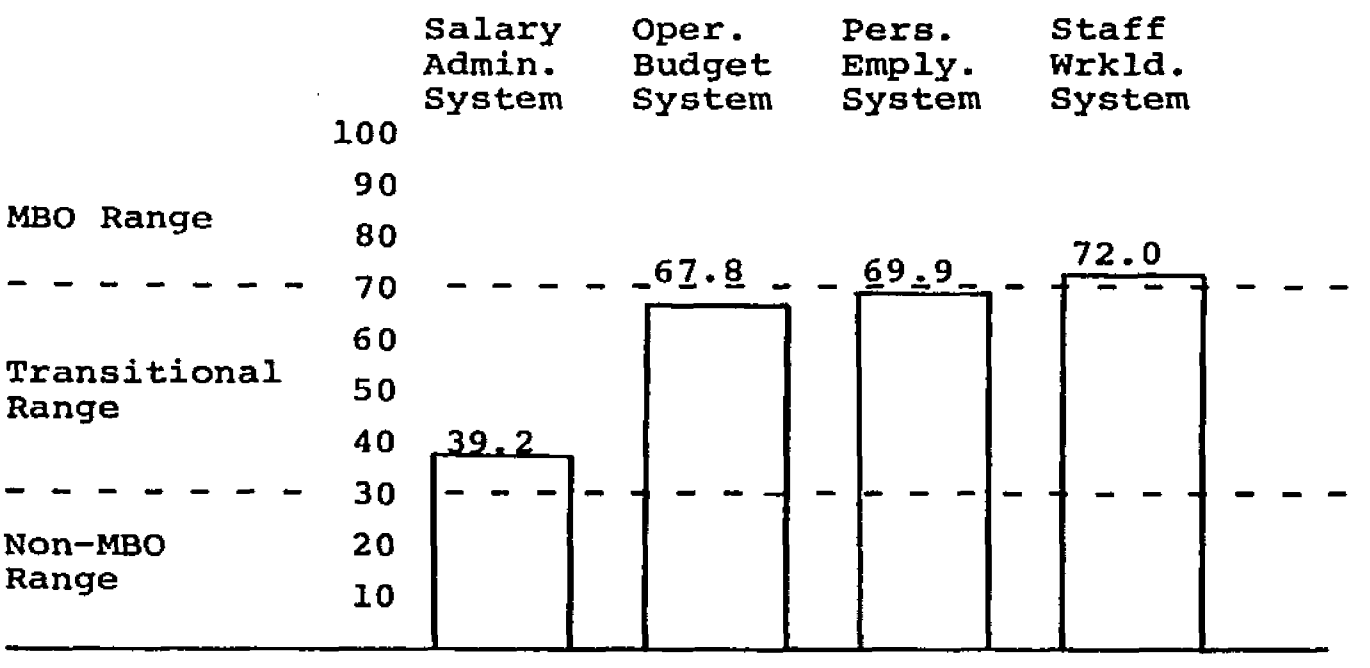
The respondents scored at the seven level on the S/J scale (Subordinates' Management Methodology) and the four level on the S/S scale (Managers' Management Methodology). The S/J scale indicates the extent to which the managers perceive their subordinates able to work under an MBO system; the S/S scale indicates the extent to which the management style the manager actually utilizes is appropriate for MBO.

Figure 1. MBO Readiness Profile - Management Style



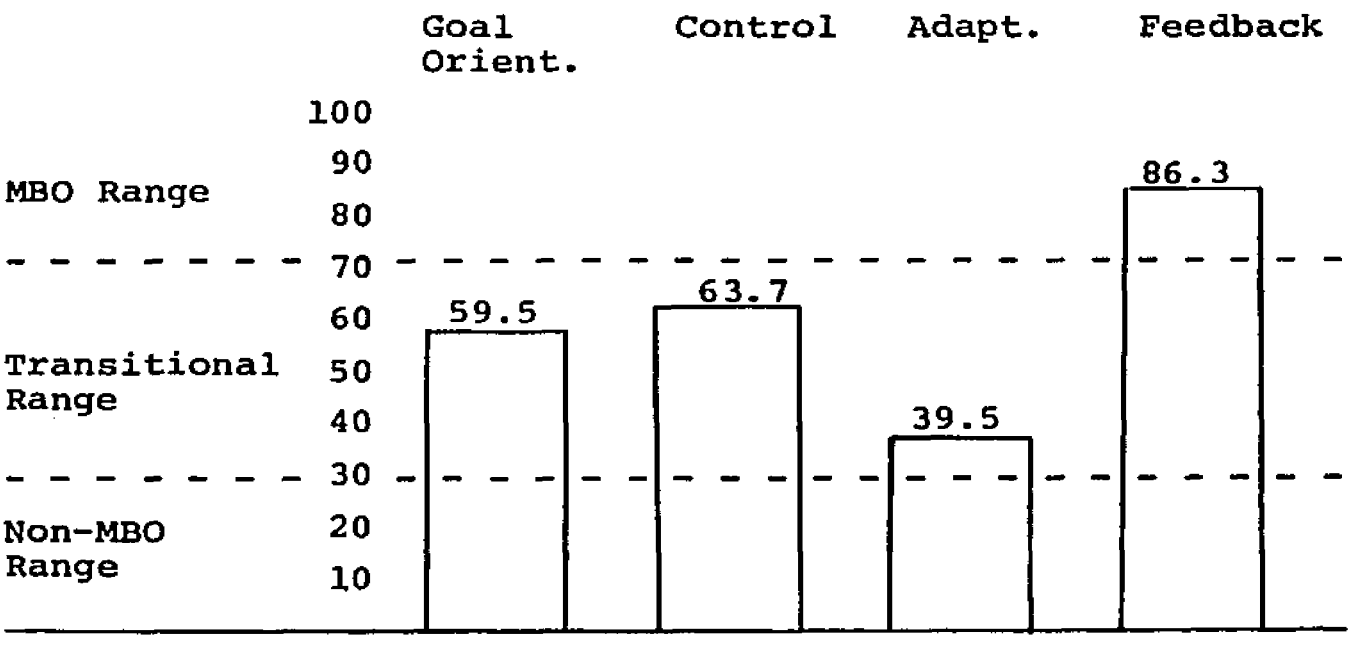
Resource Support Systems. Figure 2. shows the comparison of results obtained in Questionnaire "B" with a theoretically perfect profile of readiness to utilize MBO. The data reflects the responses of the entire population of Occupational Deans in Michigan Community Colleges. The scored position on each subscale was determined according to the procedures outlined in APPENDIX F. The level of the position indicates the percentage of time the resource support system operates in a manner supportive of MBO.

Figure 2. MBO Readiness Indicator - Resource Support Systems



MBO Resource System Success Factors. Figure 3. shows the comparison of survey results on the factors considered to be of key importance in the successful utilization of MBO. The factors are plotted against a theoretically perfect profile of readiness to support MBO. The scales shown indicate the extent (percentage of time) to which the resource support systems studied operated in a manner which was goal oriented, controllable by the Occupational Dean, adaptable to change, and providing of feedback to the Occupational Dean. The data establishing the scored position on each subscale was processed in accordance with the procedures described in APPENDIX F and represents the responses of the entire population of Occupational Deans.

Figure 3. MBO Readiness Indicator - MBO Resource System Success Factors



CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS OF THE STUDY

Summary

The purpose of the study was to determine the extent to which the management styles employed by Occupational Deans and the resource support systems available to them functioned in a manner supportive of MBO. To make such a determination it was necessary to define:

1. The degree to which the managerial styles employed by the deans were appropriate for MBO.
2. The degree to which assumptions the deans held concerning the ability of their subordinates to work under MBO would allow them to use MBO.
3. The extent to which the resource support systems were supportive of goal achievement in the occupational programs.
4. The extent to which the resource support systems are controllable by the deans.
5. The extent to which the resource support systems were adaptable to changing needs in the occupational programs.
6. The extent to which the resource support systems provided feedback information to the deans.

The study included the entire population of thirty Occupational Deans in Michigan community colleges.

Each participant was selected from the Directory of Vocational Administrators published by the Michigan Department of Education. Written questionnaires were developed, pilot tested, and mailed to the identified Occupational Dean in each community college. A total of thirty questionnaires were returned in usable form representing 100 percent of the population.

The data were tabulated upon receipt and analyzed using standard statistical programs on the Michigan State University Computer System. The programs included univariate and multivariate analysis of variance, covariance, and regression which produced population and categorical questionnaire item means and standard deviations and questionnaire subscale means and standard deviations. The program also produced an analysis of significant differences between population and categorical questionnaire subscale means. The data were also analyzed using the CISSR data analysis program which produced a distribution of population responses for each questionnaire subscale, a chi-square analysis of the data for significant relationships between variables, and a split-half correlation analysis of the questionnaire items to test for internal consistency.

Conclusions

The reliability of the instruments utilized to gather data in the study was demonstrated to be acceptable

in all subscales except one, Resource System Feedback. All others revealed a correlation coefficient above .5000. Resource System Feedback produced a correlation coefficient of only .1879. Assuming validity of the instruments, conclusions drawn concerning the results of the study may be interpreted with confidence for all subscales except the one noted above.

Management Style

The Occupational Deans as a whole demonstrated a belief that their subordinates were able to manage their own jobs in a manner which is conducive to the use of MBO. The average score on the S/J subscale of Questionnaire "A" for the entire population was 39.7 with a standard deviation of 3.4. The scored position for the Occupational Deans on the MBO Readiness Profile was 7.0 which placed them in the MBO Range. The mean scores produced for the categories of college size and organizational structure varied no more than 1.6 from the population mean score with no statistical significance revealed between the mean scores of the population and the subcategories. The results of the study would appear to support the conclusion that regardless of the organizational structure of a community college or the size of its occupational programs, the Occupational Deans perceive their subordinates as being able to utilize MBO in their jobs. Seventy percent of the

responses to the S/J subscale were positive towards MBO.

The management styles employed by the Occupational Deans were revealed in subscale S/S of Questionnaire "A". The average score for the entire population of Occupational Deans was 30.6 with a standard deviation of 3.9. The scored position of the deans on the MBO Readiness Profile was 4.0 which placed them in the Transitional Range indicating that with additional training and/or development they would likely exhibit a management style which was suitable for MBO. The scores produced for the subcategories of college size and organizational structure varied no more than 2.0 with no statistically significant differences apparent between the mean scores for the subcategories and the total population. The results of the study for both subscales S/J and S/S seem to indicate that while the Occupational Deans hold positive assumptions concerning their subordinates' abilities to work under MBO, they actually employ management styles which do not reflect that belief and are only marginally conducive to the implementation and utilization of MBO. Only forty percent of their responses concerning their own management styles were supportive of MBO.

Resource Support Systems

The resource support systems available to the Occupational Deans in the accomplishment of their objectives

were demonstrated to be supportive of goal achievement in 59.5 percent of the instances measured. The mean score for the entire population on the Goal Orientation subscale of Questionnaire "B" was 475.8 with a standard deviation of 129.2. The mean scores for the subcategories of organizational structure and college size deviated from the population mean scores by no more than 37.5 which resulted in no significant difference. The results of the study seem to indicate that the resource support systems operate in the Transitional Range as indicated on the MBO Readiness Indicator. Such a rating reveals that the resource support systems are only marginally supportive of MBO in terms of goal orientation.

The mean score of the total population on the control of resource support systems was 509.3 with a standard deviation of 150.9. The mean scores of the subcategories of organizational structure and college size deviated no more than 103.6 from the population mean score, thus no statistically significant difference was found to exist between the total population and the subcategories on control of resources. The scored position for the Occupational Deans on the Control of Resources subscale of Questionnaire "B" was 63.7 on the MBO Readiness Indicator. The score indicates that in 63.7 percent of the instances measured the Occupational

Dean exercised control over the resource support systems. The score indicates that the control exercised by the deans was near the MBO Range but remained in the marginally acceptable Transitional Range.

The adaptability of the resource support systems to change was revealed by the study to be relatively limited. The population mean score on the Resource Support System Adaptability subscale of Questionnaire "B" was 315.8 with a standard deviation of 130.3. The scored position of the adaptability subscale on the MBO Readiness Indicator was 39.5 which placed the system in the lower level of the Transitional Range. The score indicates that in only 39.5 percent of the instances measured could the resource support systems be readily changed to meet changing circumstances in the occupational programs. It may be concluded from the results of the study that the resource support systems available to the Occupational Deans are adaptable to change to only a limited extent and that the limited adaptability is not suitable to the implementation and utilization of MBO.

The low degree of internal consistency found to exist in the responses of the population on the Resource Support System Feedback subscale of Questionnaire "B" precludes firm conclusions. However, apparent conclusions may be cautiously offered for consideration. The mean score for the total population on the feedback

scale was 690.2 with a standard deviation of 63.5. The scored position on the MBO Readiness Indicator was 86.3 which placed the Resource Support System in the MBO Range. The mean scores for the subcategories of organizational structure and college size differed from the population mean score by no more than 42.4 resulting in no statistically significant difference. The results of the study would seem to indicate that the Occupational Deans receive feedback from the resource support systems in 86.3 percent of the instances measured, a substantial amount of feedback entirely suitable for utilization of MBO.

The Salary Administration subscale of Questionnaire "B" produced a mean score for the total population of 313.2 with a standard deviation of 156.7. The mean scores for the subcategories of organizational structure and college size differed no more than 92.1 which proved to be statistically insignificant. The scored position for salary administration on the MBO Readiness Indicator was 39.2 which rated very low in the Transitional Range. It would appear that of the four resource support systems studied, Salary Administration rated the lowest in the degree to which the resource support system operated in a manner supportive of MBO. In only 39.2 percent of the instances measured did the Salary Administration system support MBO.

The Operational Budget system operated in a manner supportive of MBO in 67.8 percent of the instances measured. The mean score for the population on the Operational Budget subscale of Questionnaire "B" was 542.3 with a standard deviation of 130.3. In no instances did the mean scores produced for the sub-categories of organizational structure and college size differ more than 96.6 from the population mean score on the subscale, thus no significant difference existed in the scores. The scored position of the operational budget system on the MBO Readiness Indicator was 67.8 which placed it in the top level of the Transitional Range and indicates that the system is almost to the point of operating in a manner considered necessary to the successful implementation and utilization of MBO.

The population mean score on the Personnel Employment subscale of Questionnaire "B" was 558.8 with a standard deviation of 107.3. The scored position of the Personnel Employment system on the MBO Readiness Indicator was 69.9 placing it at the top of the Transitional Range and only a half of a point away from the MBO Range. The mean scores for the subcategories of organizational structure and college size were different from the population mean score by no more than 59.9 points; no significant difference was found to exist between the population and the subcategories on the scores. The results of the study indicate that in 69.9

percent of the instances measured the Personnel Employment systems available to the Occupational Deans operated in a manner supportive of the successful implementation and utilization of MBO.

The Staff Workload Assignment system operated in a manner supportive of MBO in 72.0 percent of the instances measured. The population mean score on the Staff Workload Assignment subscale of Questionnaire "B" was 576.8 with a standard deviation of 111.9. The mean scores produced by the subcategories of organizational structure and college size differed from the population mean score by no more than 37.7 indicating no statistically significant difference existed between the population and the subcategories on the mean scores. The scored position on the MBO Readiness Indicator for the Staff Workload Assignment system was 72.0 which placed it firmly in the MBO Range. The score indicates that the system operated in a manner conducive to the successful implementation and utilization of MBO.

Relationships Between Variables

Although no significant differences were found to exist between the mean scores for the total population and the mean scores for the subcategories of college size and organizational structure, there appeared to be a relationship between the variables of college size and the subscale scores and between

organizational structure and the subscale scores. The relationships are shown in Table 17 on page 85 in the form of correlation coefficients. A correlation coefficient of -.351 between college size and the mean scores produced on the Operational Budget subscale indicated that as college size increased the Operational Budget system grew less supportive of MBO. Similarly as college size increased, the Personnel Employment system became less supportive of MBO (r = -.367), the resource systems became less adaptable to change (r = -.239), the Occupational Dean was able to exert less control over the resource support systems (r = -.309), but the resource support systems provided increased feedback (r = .333).

The type of organizational structure appeared to have a relationship with the subscale scores as is indicated in Table 17 on page 85. As the organizational structure changed from Type I to Type II and III, the Managers' Management Methodology became more supportive of MBO (r = .395), the Operational Budget system grew more supportive (r = .348), and the Personnel Employment system became more supportive of MBO (r = .442). As the organizational structure changed type the resource support systems grew more goal oriented (r = .271), more controllable by the Occupational Deans (r = .253), more adaptable to change (r = .256), and provided more feedback information (r = .311).

Although the relationships between the variables did appear to exist, it must be remembered that the mean scores produced by the population did not differ significantly from the mean scores produced by the subcategories of organizational structure and college size. A possible explanation of the fact that a relationship existed between the variables while not producing a significant difference in the results of the subscales is that the subscale mean scores were produced for groups of respondents whereas the correlation coefficients between the variables were produced on the basis of individual respondents. The relationships between the variables could exist within the subcategories of organizational structure and college size. Within the subcategory of College Size I, there exists nine different college sizes. Within the subcategory of Organizational Structure III, there exists fourteen different respondents.

The relationship between a manager's perception of his subordinates' management methodology and the subscale scores in Questionnaire "B" can be seen in the correlation coefficients shown in Table 18 on page 86. It would appear that as a manager's assumptions concerning his subordinates' abilities to work under an MBO system grew more positive, the Personnel Employment system (r = .286) and the Operational Budget system (r = .266)

likewise grew more supportive of MBO. It also appeared that the resource support systems increased in adaptability to changing needs as the Subordinates' Management Methodology score increased (r = .497).

As the Managers' Management Methodology score increased, the Operational Budget system (r = .485), Personnel Employment system (r = .560) and the Staff Workload Assignment system (r = .401) increased in support for MBO. Likewise, the resource support systems became more goal oriented (r = .288), the Occupational Deans exerted more control over the systems (r = .553), the systems became more adaptable to changing needs (r = .312), and the systems provided more feedback information (r = .445).

It is not the intent of the author to infer that a causal relationship existed between the variables. The results of the study indicate that as one variable increased in magnitude other variables seemed to also increase in value or decrease in value as was indicated by the correlation coefficients. The degree of the relationships between the variables is indicated by the magnitude of the correlation coefficients. It is possible that a manager's management methodology affects the resource support systems about him or that the resource support systems affect a manager's management methodology or his assumptions concerning his subordinates.

However, it is beyond the scope of this study to arrive at such conclusions. The results of the study simply indicate that a relationship does exist between the variables.

The wide spread in the score distributions on all of the subscales in Questionnaires "A" and "B" and the large standard deviations in the scores on the subscales in Questionnaire "B" indicate that the Occupational Deans in Michigan community colleges varied significantly in their mode of operation in the administration of occupational education. It may be concluded that for the most part the Occupational Deans were not similar to one another in their management styles and in the manner in which they were able to utilize their financial and nonfinancial resources. It would appear that some unidentified underlying factors affected the mode of operations of the deans. What those factors might be is a matter of conjecture. Perhaps the individual personalities of the Occupational Deans cause them to differ from one another. Perhaps it is the varying environments of the community colleges in which they function which cause the differences as Odiorne pointed out in stating that the values and goals of an organization shape the behavior of a manager.

This study did not seek to determine the causal factors for differences which might appear between the responses of the individuals participating in the study

other than the factors of college size and organizational structure. It was found that the factors did not result in significant differences in the mean scores of the subcategorical groups of respondents on the subscales of the questionnaires. The factors did, however, relate to the scores of the individual respondents on the questionnaire subscales.

Implications

The foremost implication of the study reinforces the findings of Tosi and Carroll that MBO must be carefully implemented, taking into account the individual differences of each manager. A blanket approach to implementing MBO in all of the community colleges in Michigan would surely result in undue difficulties for many Occupational Deans.

The deans operate differently from one another in their individual community colleges. No single approach to management could be appropriate for all of the Occupational Deans in Michigan community colleges. However, taken as a group or in subcategorical groups determined by college size or organizational structure, certain conclusions and implications can be derived from their responses to the study questionnaires. The conclusions and implications represent the characteristics of the Occupational Deans as a group rather than as individuals.

The findings of the study seem to imply that except for the Staff Workload Assignment system, the resource support systems Information Feedback, and the Occupational Deans' assumptions as to their subordinates' abilities to work under MBO, neither the management styles employed by the deans nor the resource support systems operate in a manner which would support the successful implementation and utilization of MBO. The Operational Budget system and the Personnel Employment system operate in a manner which is close to being appropriate for the utilization of MBO but do not measure up to an acceptable level of support.

If MBO is to be successfully implemented in Michigan community colleges, several factors in the situation will need to change. The management styles actually employed by the Occupational Deans must become more participative, and the Occupational Deans must delegate more responsibility and authority to their subordinates. As the findings indicate, the deans already believe their subordinates have the capabilities to handle responsibility and authority; the deans have not, however, exercised a management style which takes advantage of their assumptions. The results of the study tend to reinforce Bender and Richardson's conclusions that educational administrators utilize less effective management styles. The results of the study indicate that the deans utilize

management styles similar to McGregor's Theory X in that they do not use participative management. However, the study also reveals that the resource support systems available to the deans do not adequately operate in a goal achievement manner. Thus one may conclude that the actual management styles employed in community college occupational education might be described as both non-participative and non-goal oriented. Such a management style would be considered less effective than other management styles according to current management theories.

The salary administration system must change to reward accomplishment, become flexible and adaptable to changing needs, and become more controllable by the Occupational Deans. The salary administration system is one of the most crucial factors in an MBO setting as it directly affects all persons in the system. It is also one of the most direct means by which an individual can be rewarded for goal accomplishment. As the study findings point out, the salary administration system in Michigan community colleges does not presently operate in a manner conducive to the effective utilization of MBO.

All resource support systems need to become more adaptable to changing needs. The findings of the study would tend to support Corrick's study in which he

determined that the resource allocation systems in community colleges tend to be static and unrelated to need. The study results also support Komar's findings which pointed out that chief vocational-technical education administrators in community colleges identify lack of control of resource systems, financial resource allocation, and personnel staffing as major problems in the administration of occupational education.

There exists an apparent incongruency between the beliefs of the Occupational Deans and their actions. The implications of that assumption are quite profound. It could mean that the deans are prevented from exercising the type of management they would like. The findings of Komar's study that the tenure of chief vocational-technical administrators averages approximately only three years might reveal a result of vocational administrators not being able to do that which they feel is proper or necessary in the management of their personnel and resources. If it is the manner in which the resource support systems function that is the factor preventing the exercise of a management style congruent with beliefs, the resource support systems should be altered.

The incongruency could also indicate that the deans are not aware of the actual management styles they employ. Such a conclusion would reinforce the findings

of the study by Argyris in which it was demonstrated that a large majority of managers profess one management style and use another. The cause of the apparent discrepancy between actual and professed management styles could be an effect of the deans knowing the acceptable management assumptions (according to the management theory they have been taught or exposed to) but not really believing in them. If such is the case, the validity of the S/J scale in the Odiorne questionnaire would be seriously in doubt. The respondents to the questionnaire items could recognize the acceptable responses and respond to reveal themselves as "proper" managers while not revealing their actual beliefs and assumptions. The respondents might not even be aware of what their actual beliefs and assumptions are.

Regardless of what the causes may be of the incongruency between the beliefs and actions of the Occupational Deans, one may conclude that if MBO is to be successfully implemented in Michigan community colleges both the management styles employed by the Occupational Deans and the functioning of the resource support systems must change.

Problems for Further Study

A study should be conducted to determine the management styles actually employed by the Occupational Deans in Michigan community colleges and to determine

the effectiveness of each particular dean's style. The study should also identify those situational factors surrounding the Occupational Dean which might have an effect on the effectiveness of the management style.

A study should be conducted to determine the characteristics of the various salary administration systems in Michigan community colleges. The study should include a measurement of the results of the different systems to ascertain the effects of the systems on personnel motivation and satisfaction.

A study should be conducted of the motivational needs, aspirations, and qualifications of the administrative subordinates of Occupational Deans in Michigan community colleges to determine the management styles most appropriate or successful with persons exhibiting certain traits and characteristics. Such a study would clarify the need or lack of need for such management systems as MBO.

A study should be conducted to more fully explore the apparent discrepancy between the beliefs and the actions of community college Occupational Deans. The study should focus on the discovery of causal factors of the discrepancy if the discrepancy is found to actually exist. The study should determine if the beliefs professed by the Occupational Deans are real or are merely "acceptable" responses keyed by recent management

theory exposure. The study should also determine environmental factors which might bear on the actions of the deans such as the beliefs and actions of their immediate superiors.

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APPENDICES

APPENDIX A

COVER LETTER

Lansing Community College
419 N. CAPITOL AVE., LANSING, MICHIGAN 48914
Serving the Heart of Michigan

March 4, 1974

Dear Colleague:

As you know from my previous conversation with you, I am presently engaged in a study of management styles utilized by occupational deans in Michigan community colleges and the support systems available to the occupational deans in the performance of the management function. Your assistance in this study is of the utmost importance to me and will be greatly appreciated.

You will find enclosed a two-part questionnaire and a self-addressed return envelope. Each part of the questionnaire is preceded by instructions for completing the questionnaire. It should take approximately only twenty minutes to complete both parts.

You will notice that the questionnaires are identified by code numbers. The code numbers are necessary so that the questionnaires can be grouped by college size for data analysis. You, as an individual, and your particular community college will not be identified in any aspect of the reporting of the results of this study. The only mention of your particular community college will be a listing of those community colleges participating in the study.

The study includes all of the public community colleges in Michigan, and your participation is essential in making the results of the study meaningful. I will contact you by telephone within two weeks of your receipt of the enclosed material. At that time would you please inform me of the completion and return of the study questionnaire, or would you please be prepared to give me the responses to the questionnaire items via telephone. Please be assured that only the highest professional and ethical standards will be followed throughout this study.

Thank you for your time and consideration.

Sincerely,

Charles J. Corrigan
Administrative Assistant
Applied Arts and Sciences

CJC/r
Enclosures

APPENDIX B

QUESTIONNAIRE "A" AND "B"

Code No._____

QUESTIONNAIRE "A"

Managerial Style Description

Each of the following items describes some aspect of your relationship with the administrative staff under your direct supervision. Please read each item carefully and then circle the response (1, 2, 3, 4, 5) which most nearly reflects the extent of your agreement or disagreement. Try to respond according to the way you would actually handle the situation on the job.

The term, staff member, refers to those persons directly under your supervision who have administrative roles. Such persons may include full or part time administrators, faculty members with administrative responsibilities, or other persons fulfilling roles of administrative responsibility in the occupational education programs under your direction.

Please respond to each item below.

THE BEST WAY TO GET GOOD PERFORMANCE OUT OF STAFF MEMBERS IS TO	AGREE COMPLETELY (1)	MOSTLY AGREE (2)	NEITHER AGREE NOR DISAGREE (3)	MOSTLY DISAGREE (4)	DISAGREE COMPLETELY (5)
1. Allow them extensive freedom to plan and organize their own work.....	1	2	3	4	5
2. Allow them to set up special meetings and other ways to work out their differences and conflicts.....	1	2	3	4	5
3. Not give them information unrelated to their immediate work.....	1	2	3	4	5
4. Spell out exactly what their jobs are and what is expected of them.....	1	2	3	4	5

QUESTIONNAIRE "A"

THE BEST WAY TO GET GOOD PERFORMANCE OUT OF STAFF MEMBERS IS TO .....

	AGREE COMPLETELY (1)	MOSTLY AGREE (2)	NEITHER AGREE NOR DISAGREE (3)	MOSTLY DISAGREE (4)	DISAGREE COMPLETELY (5)
5. Always insist that they solve their own work problems but be available as a consulting resource to them.....	1	2	3	4	5
6. Maintain tight controls on all work to be sure things don't get out of line.....	1	2	3	4	5
7. Provide time, money, and other resources so each person can develop his particular strengths and capabilities to the fullest..	1	2	3	4	5
8. Set up systems where information on performance results goes directly to the staff member instead of through you.....	1	2	3	4	5
9. Discourage staff members from getting involved in the "why" of their job.....	1	2	3	4	5
10. Bring them together in joint meetings to make decisions and solve mutual problems..	1	2	3	4	5
11. Give them full information about their jobs, their department, and the college...	1	2	3	4	5
12. Tell them where they are going wrong and convince them of the merits of changing their attitudes and approaches.....	1	2	3	4	5
13. Solve problems for staff members as quickly as possible so they can get back to work...	1	2	3	4	5
14. Allow them to take responsibility for controlling and managing their own work....	1	2	3	4	5
15. Encourage them to redesign their jobs around their own capabilities.....	1	2	3	4	5
16. Leave staff members alone and count on them to get their jobs done.....	1	2	3	4	5

QUESTIONNAIRE "A"

THE BEST WAY TO GET GOOD PERFORMANCE OUT OF STAFF MEMBERS IS TO .....

	AGREE COMPLETELY (1)	MOSTLY AGREE (2)	NEITHER AGREE NOR DISAGREE (3)	MOSTLY DISAGREE (4)	DISAGREE COMPLETELY (5)
17. Clamp down on conflict and friction between staff members.....	1	2	3	4	5
18. Train them to do their work according to standard procedures.....	1	2	3	4	5
19. Insist that they stick to their jobs and leave decisions and planning to you.....	1	2	3	4	5
20. Discourage staff members from introducing new ways of doing their work without first checking with you.....	1	2	3	4	5

Please proceed to Questionnaire "B"

Code No. _____

QUESTIONNAIRE "B"

Resource Support Systems Description

Each statement below refers to some aspect of the administration of the occupational programs for which you are considered responsible. Please read each statement carefully and then place an (X) on the continuum in a location which most nearly indicates the extent to which the statement is TRUE in your particular situation. (See example below)

The term, staff member, refers to those persons directly under your supervision who have administrative roles. Such persons may include full or part time administrators, faculty members with administrative responsibilities, or other persons fulfilling roles of administrative responsibility in the occupational education programs under your direction.

Although some items in the questionnaire may seem similar to others, please consider each item as a separate description. The apparent duplicity is necessary for statistical analysis and is not meant to test consistency in answering.

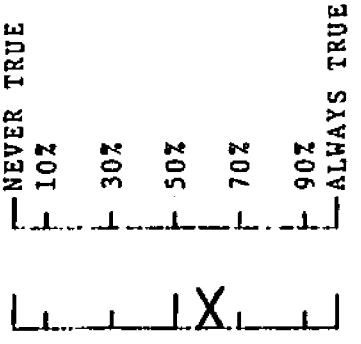
DIRECTIONS

1. Read each item carefully.
2. Consider the frequency at which the statement applies to your particular situation.
3. Place an (X) on the continuum between "Never True" and "Always True" at a location which indicates the extent to which the statement holds true in your situation.

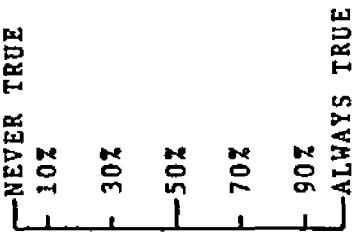
Please respond to each item.

EXAMPLE

1. I determine the workloads of the staff members under my supervision.....



QUESTIONNAIRE "B"



1. Once established, the operational budget for the occupational programs cannot be readily changed during the course of the fiscal year....

2. Information on the amount of salary and the last increase received by the staff members in the occupational programs is not readily available to me.....

3. I am kept informed of the current status of present and future position openings, applicants, and employment offers for staff positions in the occupational programs.....

4. If the needs arise, I can immediately assign short-term tasks to staff members in addition to their normal workloads.....

5. I have the primary decision-making role in determining which staff members will be hired or discharged in the occupational programs.....

6. The number of staff members employed in the occupational programs is based upon quotas for departments rather than established goals or workloads.....

7. If enrollment suddenly goes up or drops in the occupational programs, I can hire (if available) or discharge staff members within two weeks.....

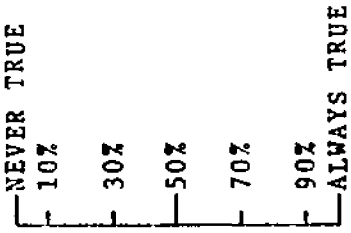
8. I determine how each task I assign to staff members will contribute to the overall goals of the occupational programs before making the assignment.....

9. Staff members in the occupational programs are currently working at near-capacity levels...

10. I receive regular reports of the current expenditures and incomes made in the operational budget of the occupational programs.....

11. If a staff member in the occupational programs is an outstanding achiever, he is rewarded with a larger-than-normal salary increase.....

QUESTIONNAIRE "B"



12. I have final control over the workload assignments of the staff members in the occupational programs.....

13. I have primary control over the amount of salary increase staff members in the occupational programs receive.....

14. Task assignments for staff members are made after a review has been made of what accomplishments are desirable in the occupational programs.....

15. The workload assignments for the staff members in the occupational programs are determined by someone other than myself who is not under my direct supervision.....

16. I interview selected applicants for staff positions in the occupational programs and make the final recommendation as to whom will be hired.....

17. I am kept informed of the probable staff personnel needs in the immediate and long-range future of the occupational programs.....

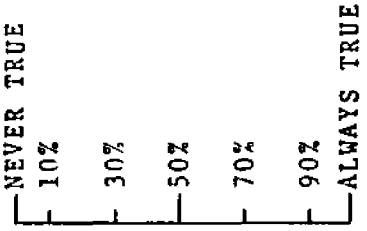
18. The operational budget for the occupational programs is determined after an analysis is made of the resources needed to accomplish desired goals.....

19. I have information on the amount of each staff member's salary and the amount of increase he last received.....

20. The operational budget for the occupational programs is set in accordance with the priorities established for various programs or the objectives to be accomplished.....

21. The number of staff members employed in the occupational programs is dependent upon the established goals to be achieved in the programs.....

QUESTIONNAIRE "B"



22. If a situation arises which dictates a necessary change in the operational budget of the occupational programs, the change can be made when needed.....

23. I have the primary decision-making role in establishing the operational budget for the occupational programs.....

24. Each staff member in the occupational programs gets about the same salary increase for his classification regardless of his performance....

25. The operational budget for the occupational programs is seldom reviewed once it has been established.....

26. The operational budget for the occupational programs is set by the central administration with little input from me.....

27. It is very difficult to assign additional tasks beyond the normal workload to the staff members in the occupational programs.....

28. Salary changes for staff members in the occupational programs may be made at any time there is a demonstrated need.....

29. It is very difficult to hire or discharge staff members in the occupational programs on short notice.....

30. Without extensive checking, I couldn't give an accurate estimate of the workload/capacity ratio of the staff members in the occupational programs.....

31. The amount of salary increases for staff members in the occupational programs is mostly determined by someone other than myself who is not under my supervision.....

32. Salaries for the staff members in the occupational programs change only annually.....

APPENDIX C

DIRECTORY OF OCCUPATIONAL DEANS AND COMMUNITY COLLEGES IN MICHIGAN

DIRECTORY OF OCCUPATIONAL DEANS AND COMMUNITY COLLEGES IN MICHIGAN

DEAN	COLLEGE	SIZE	STRUCTURE
Alan Reed	Alpena Community College	868	1
Arne Anderson	Bay de Noc Community College	1146	1
Charles White	Delta College	6869	1
Rodger J. Eckhardt	Glen Oaks Community College	434	2
Gene Dahlin	Gogebic Community College	659	3
Robert S. Duffy	Grand Rapids Junior College	1336	3
Arthur Elges	Henry Ford Community College	8053	3
W. J. Valade	Highland Park Community College	2213	3
F. Harold Matthews	Jackson Community College	1693	3
Charles Kinnison, Jr.	Kalamazoo Valley Community College	3466	2
James E. Cook	Kellogg Community College	1461	3
Garnet Stewart	Kirtland Community College	692	2
Ben Standen	Lake Michigan College	1132	1
William Monroe	Lansing Community College	7034	3
Hubert Reid	Macomb County Community College (South Campus)	11976	1

DEAN	COLLEGE	SIZE	STRUCTURE
Austin Hartshorn	Macomb County Community College (Center Campus)	2253	1
Thomas Nyquist	Mid-Michigan Community College	921	2
Robert Kollin	Monroe County Community College	774	2
Donald Olson	Montcalm County Community College	147	3
Charles Roche	Mott (Charles Stewart) Community College	5368	1
Louis Otto	Muskegon County Community College	2508	1
Arthur Francis	North Central Michigan College	990	3
James Besaw	Northwestern Michigan College	1533	1
James H. Dotseth	Oakland Community College	7871	3
Arnold E. Metz	St. Clair County Community College	2382	3
Thaddeus DieBel	Schoolcraft College	2927	1
Francis L. Hiscock	Southwestern Michigan College	1035	3
Joseph Miller	Washtenaw Community College	3068	3
Quill Pettway	Wayne County Community College	9164	1
John Schwetz	West Shore Community College	291	3

APPENDIX D

MBO READINESS QUESTIONNAIRE

M.B.O. READINESS QUESTIONNAIRE

(Each of the following items describes some aspect of your relationship with your employees. Read each item and then circle the response (1,2,3,4,5) which most nearly reflects the extent of your agreement or disagreement. Try to respond according to the way you would actually handle the situation on the job.)

The best way to get good performance out of employees is to.....	Agree Completely (1)	Mostly Agree (2)	Partially Agree (3)	Mostly Disagree (4)	Disagree Completely (5)
1. Allow them extensive freedom to plan and organize their own work.	1	2	3	4	5
2. Allow employees to set up special meetings and other ways to work out their differences and conflicts.	1	2	3	4	5
3. Not give them information unrelated to their immediate work.	1	2	3	4	5
4. Spell out exactly what their jobs are and what is expected of them.	1	2	3	4	5
5. Always insist that they solve their own work problems, but be available as a consulting resource to them.	1	2	3	4	5
6. Maintain tight controls on all work to be sure things don't get out of line.	1	2	3	4	5
7. Provide time, money and other resources so each person can develop his particular strengths and capabilities to the fullest.	1	2	3	4	5
8. Set up systems where information on performance results goes directly to the employee instead of through you.	1	2	3	4	5
9. Discourage employees from getting involved in the "why" of doing their job.	1	2	3	4	5

The best way to get good performance out of employees is to.....	Agree Completely (1)	Mostly Agree (2)	Partially Agree (3)	Mostly Disagree (4)	Disagree Completely (5)
10. Bring employees together in joint meetings to make decisions and solve mutual problems.	1	2	3	4	5
11. Give them full information about their jobs, the department and the company.	1	2	3	4	5
12. Tell employees where they are going wrong and convince them of the merits of changing their attitudes and approaches.	1	2	3	4	5
13. Solve problems for employees as quickly as possible so they can get back to work.	1	2	3	4	5
14. Allow employees to take the responsibility for controlling and managing their own work.	1	2	3	4	5
15. Encourage employees to redesign their jobs around their own capabilities.	1	2	3	4	5
16. Leave employees alone and count on them to get their jobs done.	1	2	3	4	5
17. Clamp down on conflict and friction between employees.	1	2	3	4	5
18. Train employees to do their work according to standard procedures.	1	2	3	4	5
19. Insist that employees stick to their jobs and leave decisions and planning to you.	1	2	3	4	5
20. Discourage employees from introducing new ways of doing their work without first checking with you.	1	2	3	4	5

APPENDIX E

DATA TABULATION FORM

QUESTIONNAIRE RESPONSE RECORD

Code Number _____

Size _____

Structure _____

* Reverse Score

Questionnaire "A"

*J	1.	_____
*J	2.	_____
S	3.	_____
S	4.	_____
*J	5.	_____
S	6.	_____
*J	7.	_____
*J	8.	_____
S	9.	_____
*J	10.	_____
*J	11.	_____
S	12.	_____
S	13.	_____
*J	14.	_____
*J	15.	_____
*J	16.	_____
S	17.	_____
S	18.	_____
S	19.	_____
S	20.	_____

Questionnaire "B"

*	1.	_____
*	2.	_____
	3.	_____
	4.	_____
	5.	_____
*	6.	_____
	7.	_____
	8.	_____
	9.	_____
	10.	_____
	11.	_____
	12.	_____
	13.	_____
	14.	_____
*	15.	_____
	16.	_____
	17.	_____
	18.	_____
	19.	_____
	20.	_____
	21.	_____
	22.	_____
	23.	_____
*	24.	_____
*	25.	_____
*	26.	_____
*	27.	_____
	28.	_____
*	29.	_____
*	30.	_____
*	31.	_____
*	32.	_____

APPENDIX F

SCORING AND ANALYSIS INSTRUCTIONS

SCORING AND ANALYSIS OF QUESTIONNAIRE "A"

1. Record the numerical response for each item in the appropriate space adjacent to the item number on the Questionnaire Response Record. (QRR)

2. All items on the QRR marked with a "J" pertain to the S/J scale of MBO readiness. Reverse score of all questionnaire items marked J (5-X)

3. All items on the QRR marked with a "S" pertain to the S/S scale of MBO readiness.

4. For individual questionnaires, analysis of MBO readiness is made by:

   A. Converting each "J" score of 4 or 5 to a value of 1.

   B. Converting each "S" score of 4 or 5 to a value of 1.

   C. Adding all "J" values of 1 and mark the sum on the MBO Readiness Profile under the S/J heading.

   D. Adding all "S" values of 1 and mark the sum on the MBO Readiness Profile under the S/S heading.

   E. Comparing the S/J and S/S scored positions with the theoretically perfect profile.

5. For groups of questionnaires, analysis of MBO readiness is made by:

   A. Averaging the responses for each item on all the completed questionnaires.

   B. Converting each mean "J" score between 3.5 and 5.0 to a value of 1.

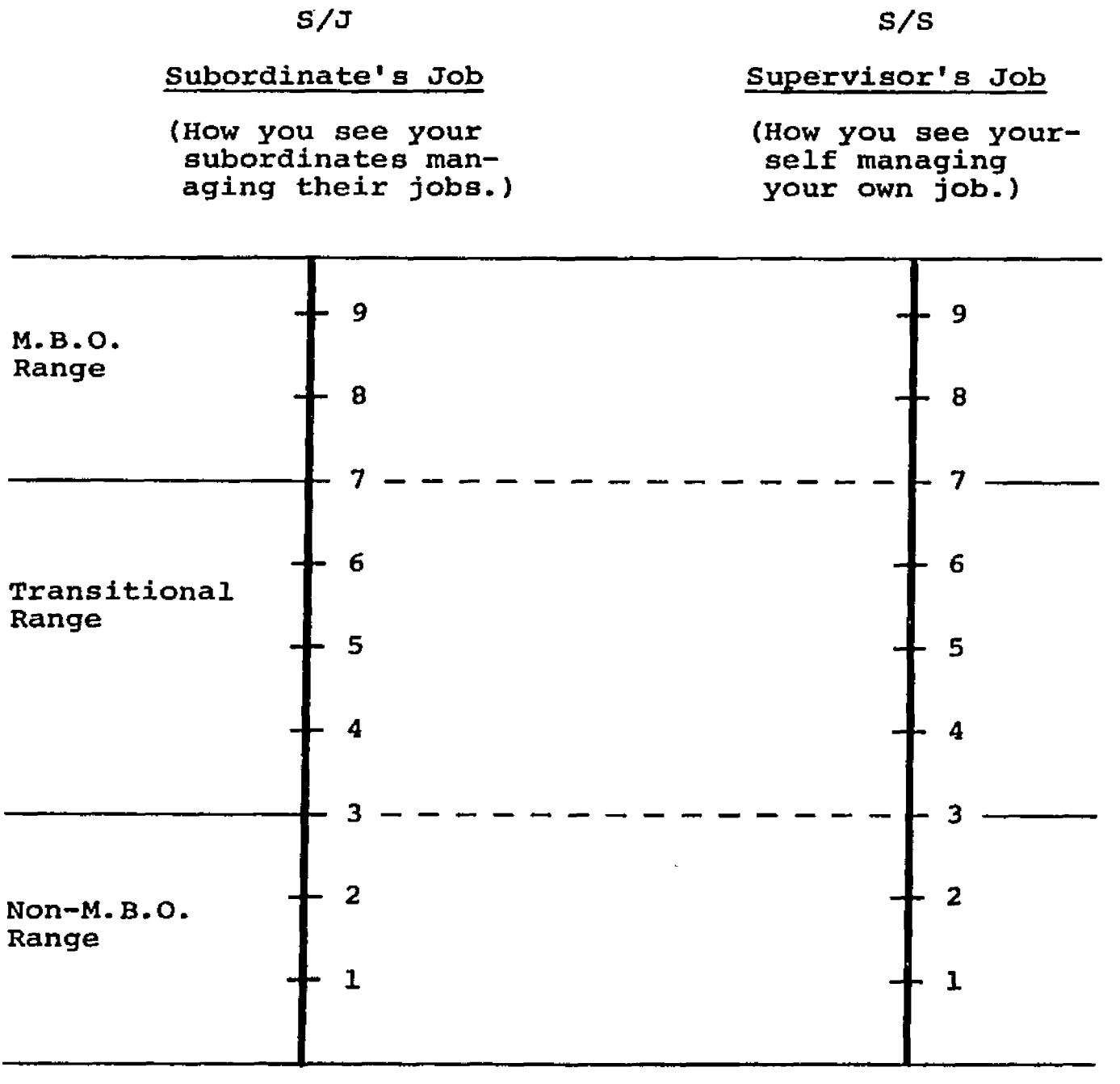
   C. Converting each mean "S" score between 3.5 and 5.0 to a value of 1.

   D. Adding all mean "J" values of 1 and mark the sum on the MBO Readiness Profile under the S/J heading.

   E. Adding all mean "S" values of 1 and mark the sum on the MBO Readiness Profile under the S/S heading.

   F. Comparing the S/J and S/S scored positions with the theoretically perfect profile.

M.B.O. READINESS PROFILE



SCORING AND ANALYSIS OF QUESTIONNAIRE "B"

1. Translate scores indicated by a check mark on the continuum for each item to a numerical value equal to the percentage figure shown.

   A. Never True = 0.

   B. Always True = 100.

   C. Check mark on a percentage marker = percentage value.

   D. Check mark between percentage marker = percentage value to nearest ten.

   E. Check mark between Never True and 10% = 5.

   F. Check mark between Always True and 90% = 95.

2. Record the translated numerical value for each item in the appropriate space adjacent to the item number on the Questionnaire Response Record. (QRR)

3. Reverse scores (100 - x) for each item marked with an asterisk on the QRR; record the reversed numerical value (100 - x) in the space adjacent to the item number.

4. Questionnaire items pertain to MBO success factors and resource support systems as indicated on the attached item schematic.

5. For individual questionnaires, analysis of MBO readiness is made by:

   A. Averaging the numerical values for all items pertaining to each MBO success factor.

      i.e., Support of Goals = average of items 11, 24, 20, 18, 21, 6, 14, and 8.

   B. Averaging the numerical values for all items pertaining to each resource support system.

      i.e., Salary Administration = average of items 11, 24, 13, 31, 28, 32, 19, and 2.

   C. Marking the mean score for each MBO success factor on the MBO Readiness Indicator under the appropriate heading.

D. Marking the mean score for each resource support system on the MBO Readiness Indicator under the appropriate heading.

E. Comparing the scored positions for each MBO success factor and resource support system with the theoretically perfect profile.

6. For groups of questionnaires, analysis of MBO readiness is made by:

A. Averaging the responses for each item on all completed questionnaires.

B. Averaging the mean responses of all items pertaining to each MBO success factor.

C. Averaging the mean responses of all items pertaining to each resource support system.

D. Marking the overall mean score for each MBO success factor on the MBO Readiness Indicator under the appropriate heading.

E. Marking the overall mean score for each resource support system on the MBO Readiness Indicator under the appropriate heading.

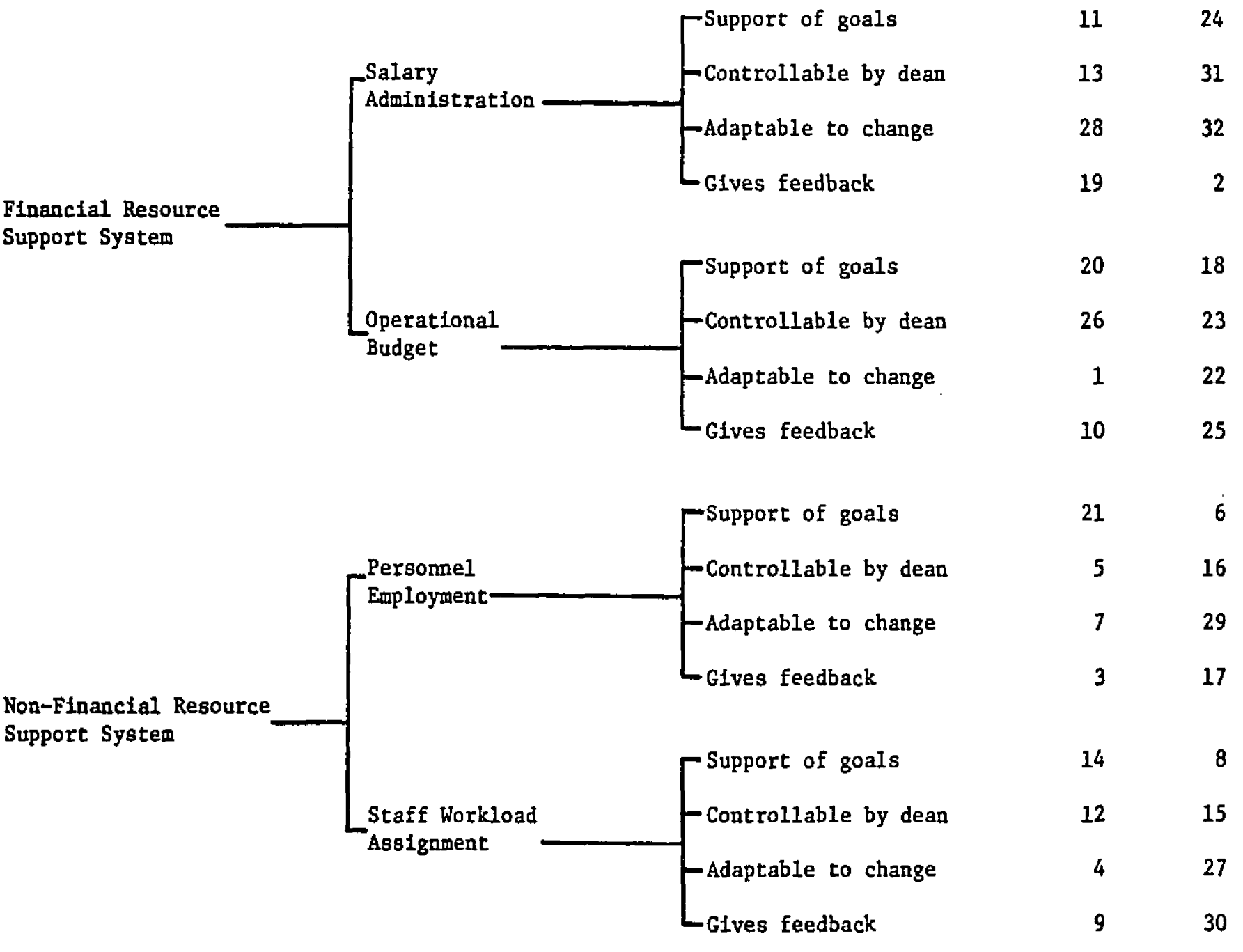
F. Comparing the scored positions for each MBO success factor and resource support system with the theoretically perfect profile.

7. Further analysis of sub-scales within the item schematic may be made as described above utilizing the numerical values of the items indicated to pertain to the particular sub-scale under investigation.

i.e., Operational budget - adaptable to change = average of items 1 and 22.

QUESTIONNAIRE "B" ITEM

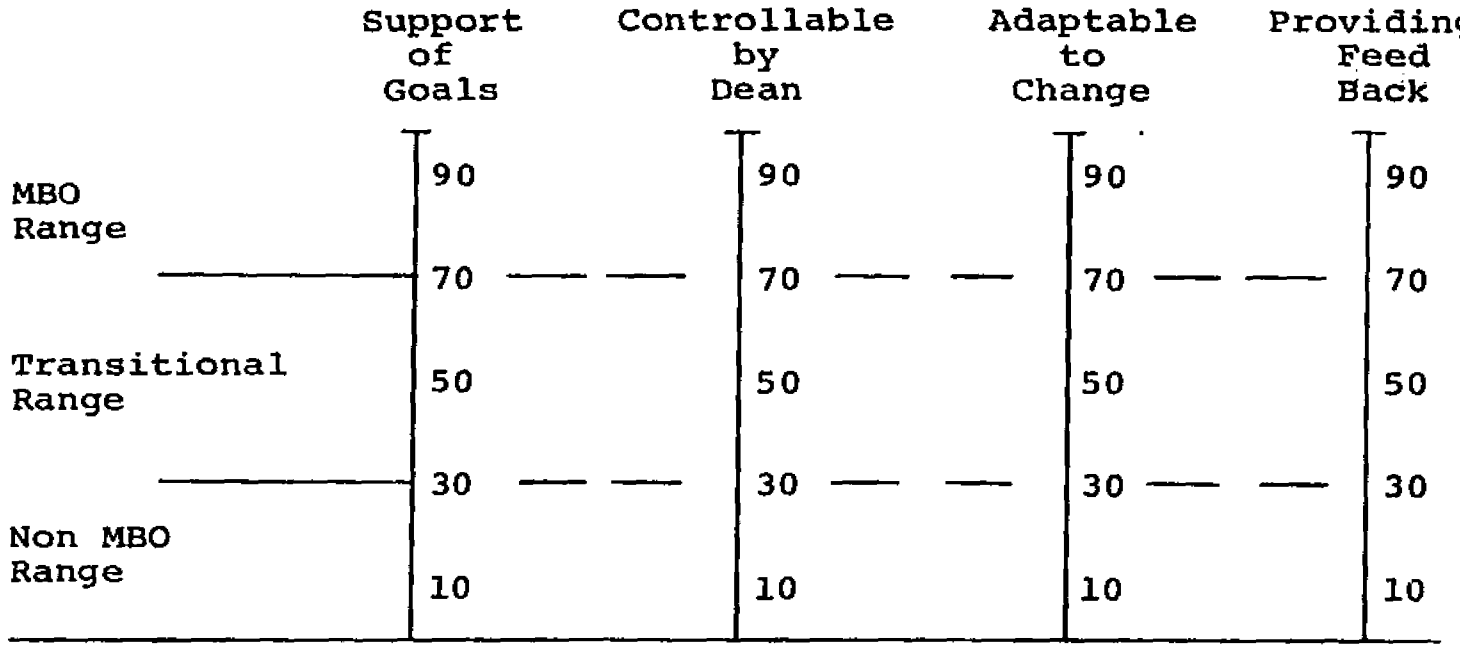
SCHEMATIC



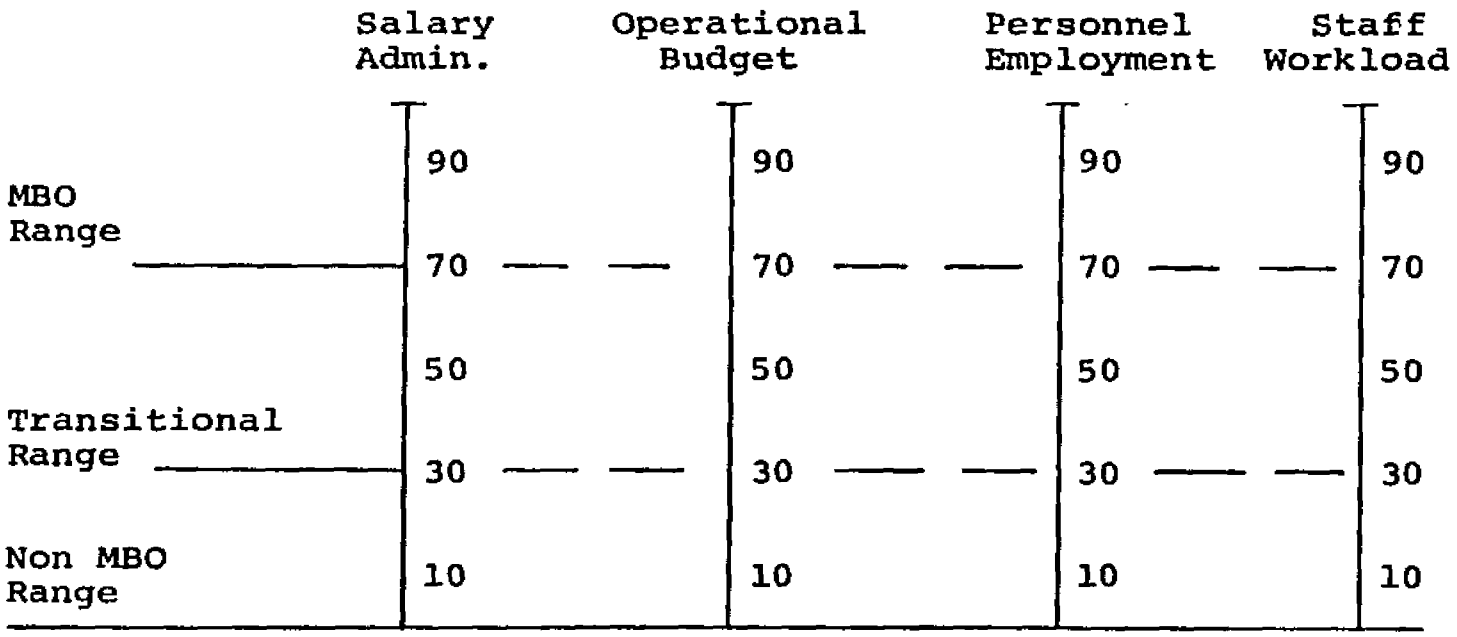
	Questionnaire Question	Number
Financial Resource Support System / Salary Administration / Support of goals	11	24
Financial Resource Support System / Salary Administration / Controllable by dean	13	31
Financial Resource Support System / Salary Administration / Adaptable to change	28	32
Financial Resource Support System / Salary Administration / Gives feedback	19	2
Financial Resource Support System / Operational Budget / Support of goals	20	18
Financial Resource Support System / Operational Budget / Controllable by dean	26	23
Financial Resource Support System / Operational Budget / Adaptable to change	1	22
Financial Resource Support System / Operational Budget / Gives feedback	10	25
Non-Financial Resource Support System / Personnel Employment / Support of goals	21	6
Non-Financial Resource Support System / Personnel Employment / Controllable by dean	5	16
Non-Financial Resource Support System / Personnel Employment / Adaptable to change	7	29
Non-Financial Resource Support System / Personnel Employment / Gives feedback	3	17
Non-Financial Resource Support System / Staff Workload Assignment / Support of goals	14	8
Non-Financial Resource Support System / Staff Workload Assignment / Controllable by dean	12	15
Non-Financial Resource Support System / Staff Workload Assignment / Adaptable to change	4	27
Non-Financial Resource Support System / Staff Workload Assignment / Gives feedback	9	30

MBO READINESS INDICATOR

MBO Resource Systems Success Factors



Resource Support Systems



APPENDIX G

TABLES AND FIGURES

Table 1. Distribution of respondents by category of college size.

Category	Size*	Number of Respondents	Percent of total
I	0000-1000	9	30.00
II	1001-2000	7	23.33
III	2001-5000	7	23.33
IV	5001 or more	7	23.33
Totals		30	100.00

*Size equals the number of Full-Year-Equated-Students enrolled in occupational programs at the community college during school year 1972-1973.

Table 2. Distribution of respondents by category of organizational structure.

Category	Structure*	Number of Respondents	Percent of total
I	OD-AD-Pres	11	36.67
II	(OD/AD)-Pres.	5	16.67
III	OD -- BD -- LAD -	14	46.67
Totals		30	100.00

*Structure indicates the organizational hierarchy in existence at the community college. OD = Occupational Dean, AD = Academic Dean, Pres. = President, BD = Business Dean, LAD = Liberal Arts Dean.

Table 3. Questionnaire item response by questionnaire subscale.

Item	Mean Score	Std. Dev.	Item	Mean Score	Std. Dev.
Questionnaire "A", Subscale -J- Subordinates' Management Methodology					
1.	4.27	.73	2.	4.23	.72
5.	3.97	.82	7.	4.06	.76
8.	3.23	1.19	10.	4.56	.55
11.	4.52	.54	14.	4.47	.50
15.	3.46	1.15	16.	2.63	1.09
Questionnaire "A" Subscale -S- Managers' Management Methodology					
3.	3.70	1.08	4.	1.70	.77
6.	3.33	.70	9.	4.43	.90
12.	2.72	.96	13.	2.19	1.15
17.	2.82	1.01	18.	2.63	.76
19.	4.03	.50	20.	3.63	1.12
Questionnaire "B", Subscale - Salary Administration System					
2.	87.50	26.14	11.	20.83	35.45
13.	17.32	28.80	19.	96.16	3.74
24.	21.99	33.38	28.	13.16	22.60
31.	40.99	43.55	32.	15.17	26.79
Questionnaire "B", Subscale - Operational Budget System					
1.	32.82	25.29	10.	84.84	23.46
18.	70.33	32.55	20.	71.62	27.85
22.	66.50	27.53	23.	67.66	25.79
25.	68.17	31.81	26.	80.83	20.70

Table 3 (cont'd.)

Item	Mean Score	Std. Dev.	Item	Mean Score	Std. Dev.
Questionnaire "B", Subscale - Personnel Employment System					
3.	94.33	8.72	5.	76.83	21.25
6.	78.17	27.26	7.	40.16	33.61
16.	77.50	20.79	17.	89.99	16.28
21.	70.16	29.42	29.	31.66	35.60
Questionnaire "B", Subscale - Staff Workload Assignment System					
4.	72.16	28.95	8.	75.99	19.58
9.	87.50	12.44	12.	68.17	34.27
14.	67.17	24.12	15.	79.99	31.14
27.	44.17	31.51	30.	81.67	22.89
Questionnaire "B", Subscale - Resource System Goal Orientation					
6.	78.17	27.26	8.	75.99	19.58
11.	20.83	35.45	14.	67.17	24.12
18.	70.33	32.55	20.	71.62	27.85
21.	70.16	29.42	24.	21.99	33.38
Questionnaire "B", Subscale - Resource System Control					
5.	76.83	21.25	12.	68.17	34.27
13.	17.32	28.80	15.	79.99	31.14
16.	77.50	30.79	23.	67.66	25.79
26.	80.83	20.70	31.	40.99	43.55

Table 3 (cont'd.)

Item	Mean Score	Std. Dev.	Item	Mean Score	Std. Dev.
Questionnaire "B", Subscale Resource System Adaptability					
1.	32.82	25.29	4.	72.16	28.95
7.	40.16	33.61	22.	66.50	27.53
27.	44.17	31.51	28.	13.16	22.60
29.	31.66	35.60	32.	15.17	26.79
Questionnaire "B", Subscale - Resource System Feedback					
2.	87.50	26.14	3.	94.33	8.72
9.	87.50	12.44	10.	84.84	23.46
17.	89.99	16.28	19.	96.16	3.74
25.	68.17	31.81	30.	81.67	22.89

Table 4. Distribution of total scores for Questionnaire "A" Subscale J, Perception of Subordinates' Management Methodology.

Actual Score	Number of Respondents	Percent of Total
33	1	3.33
35	3	10.00
36	2	6.67
37	2	6.67
38	4	13.33
39	6	20.00
41	2	6.67
42	3	10.00
43	3	10.00
44	1	3.33
45	1	3.33
46	2	6.67
Totals	30	100.00

Mode Score = 39, Mean Score = 39.7, Standard Deviation = 3.4

Table 5. Distribution of total scores for Questionnaire "A" Subscale S, Perception of Managers' Management Methodology.

Actual Score	Number of Respondents	Percent of Total
20	1	3.33
24	2	6.67
26	1	3.33
27	1	3.33
28	2	6.67
29	2	2.67
30	4	13.33
31	4	13.33
32	4	13.33
33	5	16.67
35	2	6.67
37	1	3.33
39	1	3.33
Totals	30	100.00

Mode Score = 33, Mean Score = 30.6, Standard Deviation = 3.9

Table 6. Distribution of total scores for Questionnaire "B" Subscale - Salary Administration

Score Range	Number of Respondents	Percent of Total
101 - 200	5	16.67
201 - 300	16	53.33
301 - 400	3	10.00
401 - 500	0	0.00
501 - 600	3	10.00
601 - 700	2	6.67
701 - 800	1	3.33
Totals	30	100.00

Mode Score = 220, Mean Score = 313.2, Standard Deviation = 156.7

Figure 3. MBO Readiness Indicator - MBO Resource System Success Factors

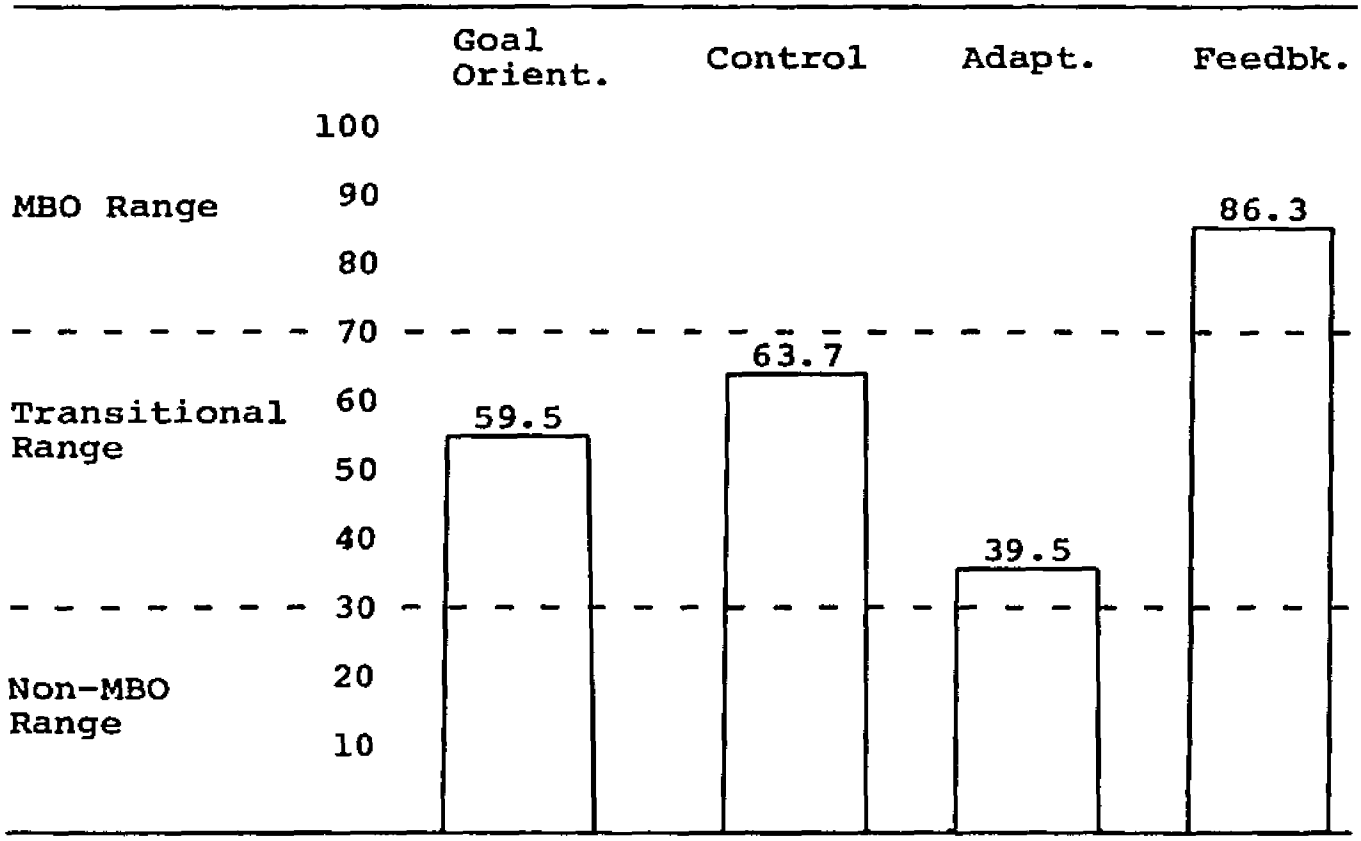


Table 7. Distribution of total scores for Questionnaire "B" Subscale - Operational Budget

Score Range	Number of Respondents	Percent of Total
101 - 200	1	3.33
201 - 300	0	0.00
301 - 400	2	6.67
401 - 500	7	23.33
501 - 600	11	36.67
601 - 700	7	23.33
701 - 800	2	6.66
Totals	30	100.00

Mode Score = 600, Mean Score = 542.3, Standard Deviation = 130.8

Table 8. Distribution of total scores for Questionnaire "B" Subscale - Personnel Employment

Score Range	Number of Respondents	Percent of Total
101 - 200	0	0.00
201 - 300	0	0.00
301 - 400	2	6.67
401 - 500	8	26.67
501 - 600	8	26.67
601 - 700	10	33.33
701 - 800	2	6.67
Totals	30	100.00

Mode Score = 535, Mean Score = 558.8, Standard Deviation = 107.3

Table 9. Distribution of total scores for Questionnaire "B" Subscale - Staff Workload Assignment

Score Range	Number of Respondents	Percent of Total
101 - 200	0	0.00
201 - 300	0	0.00
301 - 400	2	6.67
401 - 500	7	23.33
501 - 600	9	30.00
601 - 700	9	30.00
701 - 800	3	10.00
Totals	30	100.00

Mode Score = 690, Mean Score = 576.8, Standard Deviation = 111.9

Table 10. Distribution of total scores for Questionnaire "B" Subscale - Goal Orientation

Score Range	Number of Respondents	Percent of Total
101 - 200	0	0.00
201 - 300	3	10.00
301 - 400	4	13.33
401 - 500	11	36.67
501 - 600	7	23.33
601 - 700	3	10.00
700 - 800	2	6.67
Totals	30	100.00

Mode Score = 410, Mean Score = 475.8, Standard Deviation = 129.2

Table 11. Distribution of total scores for Questionnaire "B" Subscale - Control

Score Range	Number of Respondents	Percent of Total
101 - 200	1	3.33
201 - 300	1	3.33
301 - 400	5	16.67
401 - 500	8	26.67
501 - 600	8	26.67
601 - 700	4	13.33
701 - 800	3	10.00
Totals	30	100.00

Mode Score = 470, Mean Score = 509.3, Standard Deviation = 150.9

Table 12. Distribution of total scores for Questionnaire "B" Subscale - Adaptability

Score Range	Number of Respondents	Percent of Total
001 - 100	1	3.33
101 - 200	7	23.33
201 - 300	5	16.67
301 - 400	8	26.67
401 - 500	7	23.33
501 - 600	1	3.33
601 - 700	1	3.33
701 - 800	0	0.00
Totals	30	100.00

Mode Score = 455, Mean Score = 315.8, Standard Deviation = 130.3

Table 13. Distribution of total scores for Questionnaire "B" Subscale - Feedback

Score Range	Number of Respondents	Percent of Total
101 - 200	0	0.00
201 - 300	0	0.00
301 - 400	0	0.00
401 - 500	0	0.00
501 - 600	3	10.00
601 - 700	12	40.00
701 - 800	15	50.00
Totals	30	100.00

Mode Score = 625, Mean Score = 690.2, Standard Deviation = 63.5

Table 14. Mean Scores and Standard Deviations for all Subscales of Questionnaires "A" and "B"

Subscale	Maximum Score	Mean Score	Standard Deviation
Subordinates' Management Methodology	50	31.7	3.4
Managers' Management Methodology	50	30.6	3.9
Salary Administration System	800	313.2	156.7
Operational Budget System	800	542.3	130.8
Personnel Employment System	800	558.8	107.3
Staff Workload Assignment System	800	576.8	111.9
Goal Orientation of Resource Systems	800	475.8	129.2
Control of Resource Systems	800	509.3	150.9
Adaptability of Resource Systems	800	315.8	130.3
Feedback Provisions of Resource Systems	800	690.2	63.5

Table 15. Mean Scores and Standard Deviations for all Subscales of Questionnaires "A" and "B" by Category of College Size

College Size	No. of Resp.		Subscales									
			SUB MGMT	MGR MGMT	SAL ADMIN	OPER BDGT	PERS EMPL	WORK ASSGN	GOAL ORNT	CONT	ADPT	FDBK
0001 to 1000	9	M. Score	38.1	30.6	271.1	588.9	603.3	614.4	513.3	561.1	356.7	647.8
		Std. Dev.	3.4	1.5	170.0	117.5	96.8	91.4	113.7	135.3	116.2	71.6
1001 to 2000	7	M. Score	40.4	29.9	334.3	540.0	571.4	515.7	454.3	492.9	308.6	705.7
		Std. Dev.	3.9	4.6	174.6	101.0	79.0	123.8	153.3	127.8	105.3	66.5
2001 to 5000	7	M. Score	40.4	32.3	348.6	570.0	537.1	580.0	465.7	557.1	307.1	707.1
		Std. Dev.	4.2	4.1	179.6	119.9	89.0	134.9	140.8	141.6	136.3	57.1
5000 or More	7	M. Score	39.1	29.7	302.9	445.7	500.0	577.1	451.4	405.7	268.6	702.9
		Std. Dev.	2.2	5.3	111.5	159.1	147.5	97.9	131.5	170.8	170.8	40.7
Mean Score for all Respondents			39.7	30.6	313.2	542.3	558.8	576.8	475.8	509.3	315.8	690.2

Table 16. Mean Scores and Standard Deviations for all Subscales of Questionnaires "A" and "B" by Category of Organizational Structure

Organizational Structure	No. Resp.		Subscales									
			SUB MGMT	MGR MGMT	SAL ADMIN	OPER BDGT	PERS EMPL	WORK ASGN	GOAL ORNT	CONT	ADPT	FDBK
I - OD AD PRES	11	M. Score	39.7	28.6	299.1	470.0	499.1	539.1	425.5	440.9	273.6	671.8
		Std. Dev.	3.9	4.2	147.6	103.0	98.2	110.6	150.6	114.8	118.0	61.0
II - (OD/AD) PRES	5	M. Score	39.6	31.0	300.0	598.0	550.0	614.0	502.0	602.0	308.0	650.0
		Std. Dev.	3.5	2.7	198.4	115.6	90.6	72.3	95.5	169.3	116.5	87.2
III - OD-BD-LAD PRES	14	M. Score	39.5	30.6	325.0	573.6	603.6	588.6	502.1	527.1	346.4	714.3
		Std. Dev.	3.5	3.9	156.6	139.8	107.8	123.0	118.8	154.8	143.1	48.5
Mean Score for all Respondents			39.7	30.6	313.2	542.3	558.8	576.8	475.8	509.3	315.8	690.2

Table 17. Correlation of Subscale Scores with College Size and Organizational Structure.

	SUB MGMT	MGR MGMT	SAL ADMIN	OPER BDGT	PERS EMPL	WORK ASGN	GOAL ORNT	CONT	ADPT	FDBK
College Size	-.071	-.002	.100	-.351	-.367*	-.076	-.168	-.309	-.239	.333
Organizational Structure	-.030	.395*	.074	.348	.442*	.195	.271	.253	.256	.311

*Significant at the .05 level.

Table 18. Correlation of Questionnaire "A" Subscales with Questionnaire "B" Subscales.

	Questionnaire "B"							
	SAL ADMN	OPER BDGT	PERS EMPL	WORK ASGN	GOAL ORNT	CONT	ADPT	FDBK
Questionnaire "A"								
SUBORDINATES' MANAGEMENT METHODOLOGY	.101	.266	.286	.186	.147	.164	.497*	-.093
MANAGERS' MANAGEMENT METHODOLOGY	.136	.485*	.560*	.401*	.288	.553*	.312	.445*

*Significant at the .05 level.

Table 19. Split-Half Correlations of Questionnaire Subscales

Questionnaire Subscale	Correlation Coefficient
Subordinates' Management Methodology	.5639
Managers' Management Methodology	.6464
Salary Administration System	.8853
Operational Budget System	.6204
Personnel Employment System	.6565
Staff Workload Assignment System	.5455
Resource System Goal Orientation	.8726
Resource System Control	.7019
Resource System Adaptability	.7434
Resource System Feedback	.1879

Figure 1. MBO Readiness Profile - Management Style

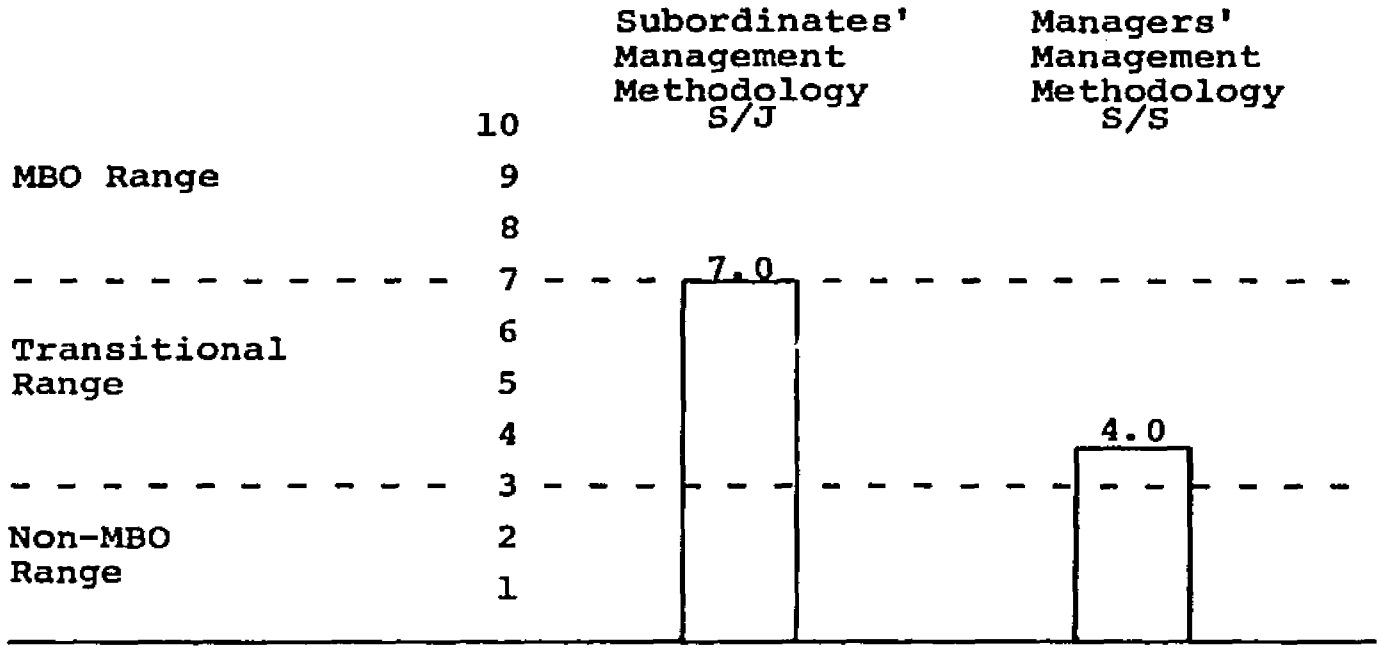


Figure 2. MBO Readiness Indicator - Resource Support Systems