1978

Development of An Institutional Research Model: Lake Michigan College

Jonas M. Dalton
Andrews University

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DEVELOPMENT OF AN
INSTITUTIONAL RESEARCH MODEL:
LAKE MICHIGAN COLLEGE

A Dissertation
Presented in Partial Fulfillment
of the Requirements of the Degree
Doctor of Education

by

• Jonas M. Dalton
August 1978
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Jonas Monroe Dalton

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ABSTRACT

DEVELOPMENT OF AN INSTITUTIONAL RESEARCH MODEL: LAKE MICHIGAN COLLEGE

by

Jonas Monroe Dalton

Chairperson: Dr. Bernard M. Lall
Title: DEVELOPMENT OF AN INSTITUTIONAL RESEARCH MODEL: LAKE MICHIGAN COLLEGE

Name of Research: Jonas M. Dalton

Name and title of faculty adviser: Bernard Lall, Ph.D.

Date completed: August 1978

Problem

Institutional research is a form of organizational self-study designed to help colleges gather data, analyze, and present the results for the purpose of aiding the administration in achieving long-range goals, ascertaining the effectiveness of institutional programs, and identifying new programs and operational changes needed to achieve institutional goals and objectives. In view of the fact that Lake Michigan College does
not have an Office of Institutional Research, the purpose of this study was: (1) to develop a proposed Institutional Research Model for Lake Michigan College, and (2) to determine the informational needs of Lake Michigan College.

Method

The informational needs assessment was conducted in two parts: administrators and faculty. Unstructured personal interviews were conducted with the president, vice-presidents, and deans. The interviews were conducted with the use of a cassette recorder, and then were transcribed and returned to the administrators for review and ranking in the order of importance. The perceived needs were compared with available data sources and those needs which were not being met were further analyzed to determine if it was possible to obtain the necessary data.

A Faculty Inventory Questionnaire was used to solicit information from the Lake Michigan College faculty concerning proposed institutional research at the college. The questionnaire was developed by Garner (1970, p. 71), who used it at Ohio Northern University. It was modified to cover the particular academic areas and faculty relationship to the college before using it at Lake Michigan College. The analysis of the data from the Faculty Inventory Questionnaire was descriptive. Except for some brief demographic information, the data analyzed dealt with the faculty's perceived needs that related to institutional research.
Further information was obtained from a selected group of institutions of higher education concerning research policies they were using to guide their institutional research programs.

The first aspect of the purpose was to develop a proposed Institutional Research Model. The model was developed from information obtained through the review of literature and material received from the selected group of institutions which were involved in institutional research.

Conclusions

The following conclusions are based on the comments of the panel.

1. The model merits trying.
2. The model can serve as a useful reference model.
3. The document will help others determine the informational needs of their colleges and universities as well as help them begin an Office of Institutional Research.
4. The review of literature related to institutional research is probably the most complete to be found anywhere.
5. The model is an excellent proposal and worthy of serious consideration.
6. The model will be of great value to a college which is in the initial stages of developing an institutional research office.
Recommendations

On the basis of the literature review and comments by the panel members the following recommendations are presented for consideration:

1. That Lake Michigan College make a full commitment to the use of institutional research and incorporate it into the college decision-making process.

2. That Michigan College establish a budget for institutional research.

3. That after institutional research has been implemented, a study should be conducted to determine the extent to which the perceived informational needs are, or are not, being met through meaningful institutional research.

4. That further study be initiated concerning additional variables which may influence an institutional research model and in particular, the institutional research process.

5. That a study be initiated concerning the relationship between the Office of Institutional Research and the center for data processing in community colleges.
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CHAPTER I

INTRODUCTION

Background

In recent years research in education has assumed increasing importance. Educational institutions need to evaluate continually their operation at all levels because they are being held increasingly accountable for the decisions they make. They are faced with limited budgets, declining enrollment in some sectors, a demand for a higher rate of efficiency, and a demand for better utilization of present resources. Decisions not only depend upon the ability of the decision-maker, but also are affected by the quality of the information used in the decision-making process. Institutional research, hopefully, will provide answers for these demands because it is research designed to improve the understanding, planning, and operation of the college.

Prior to 1955 there were only ten institutions of higher education in the United States which could boast an Office of Institutional Research (Rourke and Brooks, 1966, p. 45). By 1968, the number had increased to 995 institutions (Marshall, 1974, p. 1). Marshall goes on to suggest that "The development of improved methods and techniques for quantitative and qualitative measurements of education and administrative processes has caused
the move toward institutional research" (Marshall, 1974, p. 3). Also, the growing complexity of administration of institutions of higher education has contributed to the rise of institutional research.

According to Rourke and Brooks (1965, p. 44):

Institutional research lies at the heart of the trend toward the use of modern management techniques in higher education. While the nature and scope of this kind of activity has had a tendency to elude precise definition in the past, it can be said that institutional research is a variegated form of organizational self-study designed to help colleges and universities gather an expanding range of information about their own internal operations and the effectiveness with which they are using their resources. By collecting such data, institutions hope to make informed judgments instead of guessing or relying on the intuitions of the administrators in framing decisions on university policy.

Harvey (1974, p. 517) indicated that the shape of future events depends upon what administrators choose to do now and in succeeding years. This point is emphasized by Marshall (1974, p. 4) when he stated that "wise decisions must be made by administrators if short- and long-range goals are to be obtained." These goals can be achieved only if the proper research information is available.

Research information needed to find solutions to many problems is not available; thus administrators must rely on data which, in many instances, do not yield the desired results. An Office of Institutional Research is one way to collect and disseminate information that will provide answers and assist in decision-making.
Statement of the Problem

The institution known today as Lake Michigan College was organized in September, 1946, as the Junior College of Benton Harbor, with 78 students. From its beginning Lake Michigan College established a pattern of growth and change that reflected the school's philosophy. This flexibility enabled the college to meet the growing needs of the community. By the school year of 1976-1977 the enrollment had increased to approximately 3,442 students. As the student enrollment increased, so did the institution's community outreach. The administrative problems not only increased, but became more complex. Thus the institution has reached a state of development which requires the chief executive to have more scientific data for informed judgments.

Institutional evaluation is the chief executive's responsibility. He may ask questions such as, "How well do the students like the college?", and "How many students drop out each semester, and why?" He may also ask, "Where do we obtain help in reviewing the policies and procedures being used to guide the institution?"

Where does the chief executive turn for help in obtaining answers to his questions? Institutional research is a form of organizational self-study designed to help colleges gather data, analyze, and present the results for the purpose of aiding the administration in achieving long-range goals, ascertaining the effectiveness of institutional programs, and identifying new programs and operational changes needed to achieve institutional
goals and objectives. Thus, institutional research provides the chief executive with the needed assistance; however, Lake Michigan College does not have an Office of Institutional Research.

Purpose of the Study

The purpose of this study was twofold: (1) to develop a proposed Institutional Research Model for Lake Michigan College; and (2) to determine the informational needs of Lake Michigan College.

Conceptual Structure

Scientific research involves building an organized body of knowledge, and not the collection of miscellaneous items of information, hence a very desirable place to begin the development is a theory. "That is, the statement of a theory is a starting point for research" (Travers, 1969, p. 37).

According to Garner (1970, p. 15) the field of institutional research has not developed a theoretical structure. Griffiths (1959, p. 2) commented that it is theory which binds the substance of administration together. Shertzer and Stone (1971, p. 352) stated that:

...theory is a way of organizing and systematizing what is known about a phenomenon. In effect a theory serves as a model which is used to know what to look for, and what to expect and where to go.

Griffiths (1959, p. 75) further stated that "decision-making is becoming generally recognized as the heart of organization and the process of administration." In his definition of institutional research, Stickler (1961, p. 542) indicated that
institutional research was "research which was directed toward providing data useful or necessary in the making of intelligent administrative decisions and/or for the successful maintenance, operation, and/or improvement of a given institution of higher education."

The above comments seem to emphasize a need for some type of conceptual structure for institutional research. This need is further emphasized by Kaplan (1964, p. 268): "Without a theory, however provisional or loosely formulated, there is only a miscellany of observations, having no significance either in themselves or over against the plenum of fact from which they have been arbitrarily or accidentally selected."

In 1964, the fourth annual forum of the Association for Institutional Research devoted its attention to "A Conceptual Framework for Institutional Research," and in 1971 at the eleventh annual forum, Bernard S. Sheehan of the University of Calgary presented a paper entitled, "The Role of Institutional Research in Support of Policy Formulation" in which he proposed a "Theory of the Role of Institutional Research" (pp. 22-23). Other sources also present some information which may be used to formulate a conceptual structure for institutional research.

Baskin (1964, pp. 1, 2) proposed the following framework for the institutional researcher:

1. He "must take the initiative and responsibility in encouraging experimentation and research in new ways of teaching and learning."

2. He "should have a research and assessment function."
3. He must be willing to provide assistance in long-range planning and projection.

The institutional researcher is a resource person who may help with policy formulation, but he is not a decision-maker. Therefore, he should not be involved in the implementation of policies (Grout, 1964, p. 5; and Torrence, 1964, p. 27).

Hubbard (1964, p. 10) outlined the following conceptual framework to guide the institutional researcher:

1. He should conduct "studies which relate to the establishment and modification of institutional goals."

2. He should conduct studies which demonstrate how institutions of higher education can be organized most effectively to achieve institutional goals.

3. He should conduct "studies which evaluate the effectiveness of current programs and operations of the institution."

Tyndall (1964, p. 32) stated that the Office of Institutional Research must play an active role in policy formulation and implementation. He proposed the question, "Where does policy end and implementation begin" (p. 31)?

Wedekind (1964, p. 33) viewed the role of institutional research as:

1. A staff function, not a decision-making function;

2. Evaluator of existing policies in light of institutional objectives, but it should not be involved in the implementation of the policies;

3. A provider of data on which to base decisions;

4. Serving the faculty as well as the administration;
5. Evaluator of the effectiveness of the line operations in carrying out policies.

A conceptual framework presented by Hopkins (1964, p. 39) for the Office of Institutional Research indicated that the institutional researcher's office should be an adjunct of the president's office. It should provide the president and the central administrative officers with pertinent information that would improve the quality of the administrative and policy decisions.

Hopkins pointed out that the actual research studies may not be conducted by the Office of Institutional Research, but the staff of the office should provide leadership for those doing the work.

The Office of Institutional Research may find it useful to have a faculty advisory committee to serve the following purposes (Lyons, 1969, p. 3):

1. "Assist the director in establishing priorities for the efforts of the office";
2. "Suggest possible areas of inquiry";
3. "React to ideas of the institutional researcher for possible studies"; and
4. "Serve as a channel of communication between the office and the faculty at large."

Sheehan's theory of the role of institutional research was based on the following proposed model of an institution's policy formulation process:

1. Recognition of situations requiring action by policy formulators.
2. Explicit formulation of problems.

3. Development of alternative solutions including (a) actions required and (b) consequences of implementation.

4. Presentation of alternative solutions.

5. Understanding of solutions and acceptance of one of the alternatives.

The role of the Office of Institutional Research was described in the context of the five steps of the proposed model of the policy formulation process. Sheehan classified the operation of the office as either active or passive.

In the passive mode of operation, the Office of Institutional Research participates primarily in Step 3 of the policy formulation process. The passive mode has two types of function:

1. Gathers and presents specific statistical data on request.

2. Provides solutions of specific problems using algorithms given by the policy formulators.

In the active mode of operation, the Office of Institutional Research successfully anticipates required information needs and problems for which the office will be asked to supply alternative solutions for consideration by the policy formulators. In this mode of operation, the Office of Institutional Research can have considerable influence in the development of institutional policy if it conceives its role as being not one of policy formulation, but one of assisting policy-makers.
Sheehan presented several levels of the active mode of operation of the Office of Institutional Research. At Level 1, the office personnel are aware of the problem to be solved. They understand the sensitive issues involved and can determine the important variables before an explicit request is received.

At Level 2, the anticipation may not be relevant to a specific situation, but rather to a group of problems. The initial effort may not seem important to many people because it involves facets of administration which may become evident to the Office of Institutional Research before the need is generally recognized. At this stage the Office of Institutional Research may find that required information is not available, and it may elect to initiate development of the necessary systems to ensure that the information is ready when needed.

The Office of Institutional Research should have full support of the president and the principal administrative officers because these initiatives may focus attention toward the need for policies in certain areas, and to this extent the Office of Institutional Research may seem to be overstepping its supportive role. "If the principal administrative officers are fully involved, it becomes their priority decision when and if systems should be developed" (p. 21). The Office of Institutional Research "should not become involved in the design, development, and implementation of the new systems;" that is, "involvement beyond assisting with systems' specifications or acting as consultants to the departments charged with systems development" (p. 21).
At the Level 3 stage of the active mode of operation, it may be necessary for the Office of Institutional Research to suggest to the policy formulators new tools and techniques for solving certain problems. "Since these new methods may not be familiar to them, the Office of Institutional Research may have to instruct the decision-makers in their potential and use" (p. 21). This should not be undertaken without full support from the chief administrative officer.

In the development of a program of institutional research the following guiding principles may be useful (Brumbaugh, 1960, pp. 34, 35):

1. "Institutional research must be planned."

2. A comprehensive overview should be taken to identify crucial issues: immediate and long-range. Then research projects may be formulated.

3. "Projects thus formulated should be arranged in an order of priority on the basis of criteria to be agreed upon."

4. "Responsibility for the over-all coordination and direction of institutional research should be centralized."

5. There should be "wide participation by members of the faculty and administration in planning and conducting projects."

6. "Institutional research must be adequately financed."

Suslow (1972, p. 17) presented the following directives which he used to define the mission of institutional research:

1. Pursue institutional goals which are not mundane or perfunctory

2. Do not become involved in a continuous participation of
day-to-day policy formulation and implementation

3. Be active in assessing the long-range effects of existing or proposed policies and their implementations

4. Have a "constant quest for new methodologies and their purposeful applications"

5. Anticipate needs for commonly perceived problems and needs that are not being met by any of the existing programs

6. Accept proposals initiated by faculty members as well as those initiated by the administrators

7. Be willing to assume a wide range of responsibilities and requests to provide assistance to academic and administrative functions of the institution.

Suslow indicated that the Office of Institutional Research should be attached in a staff relationship to the highest administrative officer who had an across-the-institution responsibility. This relationship would add credibility to the office and offer broader availability to all agencies of the institution (p. 11). He stated that "there should be no conceptual limit to the number of campus agencies which can be involved in institutional research" (p. 10).

Saupe and Montgomery (1970, p. 3) classified institutional research as a staff function. They commented that the Office of Institutional Research may consult with the faculty and other committees of the institution in developing procedures for the operation of the institution, but it should not be in a line relationship to these groups (p. 3).
They presented the following eight-point outline of the function of institutional research (pp 5-9):

1. Preparation of operating reports;
2. Preparation of analytic and summary reports;
3. Conducting analytical or modeling studies;
4. Design of management information systems;
5. Special studies;
6. Studies in support of educational development;
7. Staff work which may be based more upon the individual's expertise than his responsibility to provide information or conduct studies; and
8. Responding to questionnaires.

Van Istendal (1970) made the following recommendations concerning the Office of Institutional Research (p. 133):

1. Philosophy, policy, and direction for institutional research should be developed with adequate organizational structure, staffing, and budgeting at the time the office is organized.
2. An advisory committee for institutional research should be established.
3. There should be broad participation by faculty and staff in conducting institutional research studies.
4. "Proper use of institutional research findings should be assured."

Quayle and Stevens (1976, p. 1) considered institutional research to be "research performed within an institution on current issues and problems with the purpose of providing the basis for
rational decision-making and planning and with the intention of successfully operating and improving the institution." They did not consider the compilation of data for external reports to be institutional research unless such reports were used as a basis for institutional decision-making.

Based on an analysis of the statements concerning a conceptual framework or proposed theory of institutional research, the following synthesis is presented as a conceptual structure for the Office of Institutional Research. The Office of Institutional Research should:

1. Have a staff relationship, but be an adjunct to the president's office. This will tend to add credibility to the research office and offer broader availability to all agencies of the institution.

2. Have an advisory committee of faculty and administrators to evaluate suggestions for research, suggest possible areas of inquiry, set priorities for studies, and serve as a channel of communication between the research office and the faculty and administrators.

3. Involve a wide participation in research and planning by members of the faculty and administration. Planning and conducting research studies.

4. Have responsibility for the data bank to protect the confidential nature of certain types of data.

5. Have freedom to initiate the development of the
necessary data systems to ensure that the proper information is available for problems which the office personnel may anticipate: present and/or future.

6. Have an assurance, through a commitment by the administration and faculty, that institutional research findings will be used.

7. Be able to suggest new tools and techniques for solving problems.

8. Collect data for internal and external reports.

9. Coordinate or conduct studies in new methods of teaching.

10. Provide assistance in long-range planning.

11. Make recommendations to help in policy formulation, but should not become involved in policy implementation.

12. Conduct studies which evaluate how effectively institutional goals are being achieved.

13. Conduct studies which evaluate the effectiveness of current programs and institutional operations.

14. Conduct studies which serve the faculty as well as the administration.

Significance of the Study

Lake Michigan College needs an ongoing research program to meet better the needs of its students, its faculty, the administration, and the community. The results of this
investigation will be useful to the Office of Institutional Research, as well as beneficial to each administrator. Knowing the needs of administrators and faculty will supply the director of the proposed Office of Institutional Research with insights that should assist him in performing his role in a more efficient manner.

**Limitations of the Study**

This study was limited to Lake Michigan College. The assessment of informational needs included the faculty and all key administrators: deans, vice-presidents, and the president. These administrators are involved in making decisions concerning the welfare of the institution.

**Definition of Terms**

_Institutional Research_ is a form of organizational self-study which "consists of data collection, analyses, reporting, and related staff work designed to facilitate operations and decision-making within institutions of higher education" (Saupe and Montgomery, 1970, p. 3).

_Administration_ includes those persons whose chief responsibility is to conduct the administrative duties of the college within the guidelines established by the governing board of the college, and for the realization of the educational enterprise for which the college is known (Garner, 1970, p. 21).

_Faculty_ includes the members of the teaching staff at the college who are under contract to teach and who direct at least 50 percent of the professional activity toward the teaching function.
Part-time Faculty includes those members of the teaching staff who are under contract to teach specific courses, but direct less than 50 percent of their time toward the teaching function.

Dean is the person responsible for a particular area of the institutional program.

President is the chief administrative official responsible for the over-all operation of the college.

Executive Vice-President is the officer of the college with executive authority for personnel, public relations, and academic affairs.

Vice-President of Business Affairs is the officer responsible for the financial management of the college.

Director of Institutional Research is the person in a college who is responsible for the conduct of institutional studies and the analysis of data useful for administrative policy or procedural decisions.

Developmental Research is "...the use of scientific knowledge for the production of useful materials, devices, systems, methods, or processes, exclusive of design and production engineering" (McGrath, 1970, p. 20).

Organization of the Study

Chapter 1 includes background, statement of the problem, purpose of the study, conceptual structure, significance of the study, and limitations of the study. The chapter also includes definition of terms used in the study, as well as the organization of the study.
Chapter 2 contains a review of the literature in the field of institutional research. References are given to those studies known to be related to this one.

Chapter 3 gives a description of the procedures employed for the collection and analysis of the information.

Chapter 4 contains summary of perceived needs that relate to institutional research obtained from personal interviews. It also contains material received from a selected group of institutions of higher education that relate to organizational governance, and policies and procedures used to guide the research program at the institution.

Chapter 5 contains the proposed Institutional Research Model.

Chapter 6 includes the summary, conclusions, and recommendations of the study.

Appendices include material that was pertinent to the study.
CHAPTER II

REVIEW OF THE LITERATURE

The literature review is organized as follows: the first section reviews the literature concerning the organization of an Office of Institutional Research and two proposed models for institutional research; the section is a review of the literature on the objectives of institutional research; and the last section deals with the areas of institutional research.

Organization

Function of Institutional Research

The primary function of an Office of Institutional Research is "to gather, analyze, and disseminate all meaningful institutional data" (Holmes, 1976, p. 6). She indicated that the data gathered "will prove useful in (1) assisting in the improvement of over-all institutional performance; (2) facilitating more effective and efficient use of institutional facilities and resources; and (3) providing the background facts which are so essential in making sound management decisions" (p. 6).

The following examples (Roueche and Boggs, 1968, p. 3) may be considered as meaningful areas for investigation by an Office of Institutional Research:
1. To what extent are students enrolled in programs compatible with their interests, abilities, and preparation? To what extent is talent wasted by poor programming?

2. Why do students withdraw from college before completing a program? What could—or should—be done about it?

3. What motivates students toward educational objectives?

4. What evidence suggests that the lives of students are better and more productive as a result of general education requirements?

5. How can the college and community increase their cooperation for the betterment of both?

6. Of what value to faculty are such things as fall faculty conferences, student assistants, and seminars in the improvement of teaching?

7. On what bases are grades awarded? Can those bases be improved?

8. In what direction do student interests change during their first two years? Is there a relationship between interest change and pattern of courses followed? Specific courses?

Centralization vs. Decentralization of Institutional Research

How does an institution organize an Office of Institutional Research so that it becomes an effective research vehicle? There seems to be no single mold for this organization — it may be centralized or decentralized. A centralized Office of Institutional Research initiates and carries out most of the institutional research studies (Moore, 1965, p. 4). A decentralized organization has no central Office of Institutional Research (Moore, 1965, p. 5). The research is conducted by different offices on campus which seem to be autonomous.
An example of the administrative structure for a centralized Office of Institutional Research is as follows: director, assistant director, professional staff for sub-divisions of the office, an administrative research unit, an academic research unit, an offices service unit (liaison officer with the faculty), full-time secretary, and possibly graduate or undergraduate students (Moore, 1965, pp. 5,6). This structure would apply to a large research office. Smaller institutions would reduce the size of their staff to meet budget and work constraints.

Torrance (1964, p.24) visited 12 institutions which seemed to fit into one of the following four general, categories of organizational structure:

1. There was no central program of institutional study. Studies were conducted by several individual offices, such as registrar, dean of students, development office, etc.

2. A faculty committee of the Psychology and Education Departments conducted research studies using graduate students as researchers.

3. There was an Office of Institutional Research, as well as several other offices which were engaged in special phases of institutional study.

4. There was an Office of Institutional Research responsible for research efforts.

Brumbaugh's comments (1960, p. 27) on centralization versus decentralization of the Office of Institutional Research were:
1. The centralization of research functions is most characteristic of institutions of medium size. Large institutions more often have some type of decentralized organization, while small institutions generally lack any formal organization.

2. Where institutional research is centralized the responsibility for directing, conducting, or coordinating the research is most often assigned to a full-time or part-time institutional research officer, although in some institutions an administrative-faculty committee serves as the planning and coordinating agent.

3. Where there is a decentralized organization, institutional research is generally done by various persons: deans, administrative assistants, registrars, business officers, faculty members, or special committees.

4. A significant number of institutions that have centralized institutional research functions also have institution-wide advisory committees on institutional research.

A centralized Office of Institutional Research may have a director and a secretary, with possibly undergraduate or graduate assistants. This and other proposed centralized structures make it possible to involve other staff members, administrative officers, and faculty members in the research process (Mason, 1967, p. 33; Dressel and Associates, 1971, p. 22). This method also allows the institutional research staff to give technical or methodological advice to others on problems they are investigating, and it is likely to gain respect for, and acceptance of, institutional research by the faculty and administrators (Moore, 1965, p. 7; Dressel and Associates, 1971, p. 22).
Role of Institutional Research in Policy Formulation and Implementation

Gross (1977, p. 23) pointed out another concept that needs to be considered in organizing an Office of Institutional Research: "It is not enough to describe and analyze what an institutional researcher is and what he does," because this ignores the questions of what he should do and for what he should be responsible. He seems to be concerned with the link that may exist between a researcher's work and institutional policy formulation and implementation, since institutional research is supposed to lead to improved understanding, planning, and operation of the institution (p. 26).

Researchers do not exhibit a uniform set of ideas on their involvement in policy formulation and implementation. Stecklein (1970, p. 138) indicated that the Office of Institutional Research should maintain objectivity by dissociating itself from policy formulation; that is, it should not recommend policy, only report "implication in general terms." Wedekind (1964, p. 33) stated that an institutional researcher may "be involved in the formulation and implementation process, or the formulation and evaluation process, but not all three." Mason (1967, p. 32) commented that the "role of institutional research in decision-making is a staff service function"; that is, staff specialists conduct research, integrate information, and evaluate alternatives along with their consequences for policy formation. Doi (1964, p. 53) also stated that institutional research is a staff function and should not be directly involved in policy formulation or implementation. Sheehan

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(1971, p. 20), and Dressel and Associates (1971, p. 51), indicated
that the institutional researcher must remain neutral; he may
present alternate courses of action, but not recommendations.

Hubbard (1964, p. 7), Baskin (1964, p. 1), and Montgomery
(1967, p. 5), viewed the institutional researcher as a change agent
in the learning environment. To carry out this function, Hubbard
stated that the researcher should help establish and modify
institutional goals, as well as help the institution organize to
achieve its goals (p. 8). Torrence (1964, p. 27) commented that
"institutional study should include participation in policy
recommendations," but not in policy implementation. Montgomery
(1967) declared that a researcher "must take stands which may
influence policy-making" (p. 8), and he pointed out that
"recommendations appear essential for a good report" (p. 7).

Institutional research is a staff function in an advisory
role to the faculty as well as to the administrators. Since the
institutional research director reports to a high administrative
manager, it is difficult to avoid the role of policy
implementation. Thus, "the implication is not valid that policy
decisions and implementation are done by administrators without
those in institutional research or planning becoming involved"
(Bagley, 1967, pp. 1, 2).

Tyndall (1964) seemed to feel that the distinction between
the line and staff functions "becomes very hazy in practice in an
educational institution and may not be a meaningful distinction at
all." He stated that policy decisions are made at "every level in
an administrative hierarchy," and these decisions must be implemented. On this basis institutional research has an important role to play in policy implementation. Policy implementation may require the Office of Institutional Research to raise and answer some very difficult questions. That is, the researcher may have to conduct another study before the implementation can be made. For example, the results of a study may indicate the need of a new facility. This raises the question, "What costs are relevant and how should they be measured?" Thus the institutional researcher may be required to design another study to answer the questions of cost (p. 30).

"If the researcher decides to go beyond the presentation of information, his report should reflect this decision. Policy implications should be spelled out, and special recommendations should be clearly made" (Gross, 1977, p. 30).

Priorities in Institutional Research

Gross (1977, p. 24) stated that the researcher should have a significant effect on his institution, and one way to do this may be to establish research priorities. These "priorities should be given to studies which will be interpreted and used to examine where the university is going and to raise questions about how these developments correspond with the avowed purposes of the university and the current needs of the society which it serves" (Dressel and Associates, 1971, p. 26). Dressel also indicated that "the basic purpose of institutional research is to probe deeply into the workings of an institution for evidences of weaknesses or
flaws which interfere with the attainment of its purposes" (Dressel and Associates, 1971, p. 23).

It seems that institutional research should not include every type request received by the Office of Institutional Research. This thought is brought out by Roueche and Boggs (1968, p. 5) in their statement "the mere compilation of readily available data cannot be labeled 'institutional research'." They also included the writing of proposals to procure federal funds as non-institutional research. Cohen and Fenske seemed to feel that institutional researchers should not waste their energy on filling out external forms or questionnaires, or conducting spur-of-the-moment, miscellaneous research requests (Cohen, 1975, P. 47; Fenske, 1970, p. 12). Dressel stated that the demands for data through questionnaires from external agencies require many hours to complete "because there is no standardization in the form of the requests." He continued his remark by stating that "outside requests and even occasional requests by individuals and offices internal to the institution are sometimes based on definitions irrelevant to the major problems which should be confronted in an Office of Institutional Research" (Dressel and Associates, 1971, p. 24).

The Role and Operational Procedures of an Office of Institutional Research

In developing a program of institutional research, an institution should consider several guiding principles. Some of the more important of these are as follows:
1. Institutional research must be planned.

2. Responsibility for the direction, coordination, and review of institutional research should be centralized.

3. The executive officer of the institutional research agency should report to a major institutional officer, preferably the president.

4. Institutional research must be adequately financed.

5. An institution-wide advisory committee should assist the institutional research agency in carrying out its responsibilities.

6. Provisions should be made for wide participation by faculty members and administrative officers in planning and conducting institutional research projects.

7. Activities of the institutional research agency must be carried out at the highest levels of professional ethics (Stickler, 1965, pp. 19-22).

In developing an Office of Institutional Research, there are certain functions for which the office should be responsible (Moore, 1965, pp. 9-13):

1. It should promote, stimulate, direct and coordinate institutional studies. The following points should aid in the fulfillment of this function:

   a. The office personnel should conduct some of the studies.

   b. "The director and his staff should give priority to constant study of the institution;" that is, identifying and suggesting for study unrecognized problems, and cooperating with "faculty members and administrative officers in their investigations of institutional problems."
c. The director should be able to get along with others and accept criticism gracefully.

d. The director should keep the faculty and administrators informed of the institutional research being conducted or completed to prevent overlapping or repetition of studies.

2. It should act as a clearinghouse and communication center. For example,

a. Each potential researcher should submit the topic and an outline of its scope to the Office of Institutional Research before he begins the study. He should submit to the office progress reports at the end of each quarter or semester, and deposit a copy of the final report at the end of the study.

b. A copy of statistical and data processing reports should be deposited in the research office.

c. All questionnaires received from external agencies and those from within the institution should come to the research office. This assures that answers to questions are uniform and accurate.

d. Experienced institutional research personnel should help in designing questionnaires, because they have the expertise to state questions in the correct way.
e. The office should develop a file of institutional research studies and statistical reports completed within the institution.

f. The office should keep institutional personnel informed about pertinent statistical data and institutional studies in progress or completed within the institution.

From a practitioner's viewpoint, Moughamian (1972, p. 52) offered the following guidelines to be used in systematizing an institutional research program:

1. The position of Director of Institutional Research must be a staff rather than a line position.

2. Philosophy, policy, and direction for research should be developed as soon as possible and given adequate organizational strength, staffing, and budget.

3. An advisory committee should be formed to interest faculty and staff in planning and implementing the research program.

4. Broad participation by faculty and staff in doing actual research should be encouraged; it is neither desirable nor practical for the research office itself to attempt all institutional studies, but rather, it should provide leadership and support.

5. Provision for use of the findings should be assured; they should be widely disseminated within the system, as well as to those directly concerned.

6. To have a viable institutional research program, in-service training of faculty and staff on its nature and its importance to decision-making is recommended.

Cook (1971, pp. 60-62) reported on a study where he selected concepts from a review of literature to formulate criterion statements for the organization and administration of
institutional research in junior colleges. The criterion statements were mailed to a group of 318 jurors who were asked to draw upon their experiences and observations to determine which criterion statements should be put into practice by junior college administrators. More than fifty percent of the jurors recommended the following criterion statements (Cook, 1971, pp. 174-177; Cook, 1972, pp. 4,5) as being helpful in establishing policies and procedures for institutional research:

1. The Office of Institutional Research should collect data which is needed for the development, evaluation, and control of operations.

2. The office should be guided by the conceptual scheme that would involve different individuals and offices in the total research process.

3. A coordinating committee should be selected which would be composed of all officers engaged in some aspects of institutional research at the institution.

4. The office should clarify definitions and develop procedural standards which would make for a greater consistency in the gathering and maintenance of data.

5. The office should maintain jurisdiction over studies which are repeated over a period of time.

6. An advisory committee should be selected to assist the Office of Institutional Research. Some of its responsibilities should be to:
a. "help adopt a statement of general principles relating to institutional research activities" (p. 176);
b. give advice concerning priorities for proposed research;
c. represent the views of faculty and students when research studies are related to their welfare.

7. The office should provide experimental design and evaluation services to individual faculty members who are experimenting with new techniques of teaching and learning.

8. The office "should maintain a master list and file copies of all institutional studies, completed and in progress" (p. 177).

9. The director for the Office of Institutional Research should
   a. "participate in inter-institutional research by completing and returning questionnaires seeking institutional data from him, and by studying practices at other colleges" (p. 5);
   b. hold a staff position and report to the president;
   c. be a member of any administrative council;
   d. take part in the decision-making process even though actual decisions are made by line officers;
e. have taken graduate work in methods of educational research and statistics, and should have a knowledge of systems analysis and electronic data processing.

If an institution is preparing to establish an Office of Institutional Research, Snyder (1971, pp. 10-16) offered the following views on the role of the institutional researcher and the Office of Institutional Research for the beginning researcher:

1. Where there will be a comprehensive program of institutional research the director should report to the president.

2. Research objectives should be clearly specified and further developed into a list of potential research projects. Early planning will allow the director to
   a. focus only on project(s) of greatest acknowledged value to the college;
   b. avoid cost overruns and the resulting inability to complete projects because of lack of funds;
   c. demonstrate a model of rational planning and acquire experience for subsequent planning;
   d. demonstrate the value and practicality of institutional research (p. 11).

3. The researcher should develop a proposed budget based on the proposals for the research projects. The proposals will have provided for clerical help, office space, travel and related expense, and data processing.
4. The director may be expected to coordinate an array of periodic reports to state and federal agencies. As important as these may be, they tend to displace more significant and valuable research functions. An additional problem arises when the researcher assumes the role of handyman or assistant to the president. Providing information for the president is necessary, but it must not displace more valuable research activities.

5. "The development of research priorities should be tied to the educational objectives of the college" (p. 12).

6. The director should develop procedures for disseminating research findings. The research findings should be assimilated into the institution's educational practices.

7. The faculty should become engaged in research activities of educational programs, students, and learning outcomes. The involvement of faculty and administrative staff in research tends to enhance its relevancy.

8. An institutional research committee may help identify research needs, assess the value of research activities, encourage faculty and administration participation and help relate research efforts to the basic functions of the institution.
9. Some criteria which the researcher may use to evaluate the institutional research program are:

a. Were the objectives of the projects realized?

b. Were the research projects completed and results reported to the president, administrators, and other groups?

c. Were the findings expressed in useful form for other college educators?

d. Were the costs of the projects in line with anticipated costs, and in line with costs at other colleges?

e. Did the instructors and administrators have a positive attitude toward the institutional research effort?

f. How have the results been incorporated into the operation of the college?

g. What recommendations exist for future research projects and procedures? (pp. 15, 16).

10. "The basic responsibility for assessing the results of any research activity should lie with the director" (p. 16). The research committee should also share in the assessment. A written report of the evaluation should be submitted to the president.

11. "There should be opportunity for professional growth. This is important since the director may have to work without researcher colleagues and he may have limited research experience."

Blai (1971) writing from experience in institutional research indicated that the director should report to the president, and he should be responsible for:
1. the development and conduct of the centralized college institutional research function, and for stimulating, helping, and coordinating the studies of others to avoid duplication;

2. all activities necessary for on-going evaluation of how well the college achieves its self-imposed objectives;

3. cooperation with other college personnel on theoretical ('pure') research to expand basic knowledge in the complex teaching/learning process;

4. conducting, at the direction of the president, studies on administration, admissions and enrollment, curriculum, faculty, finance, goals and objectives, instruction, plant, public relations and development, and students;

5. encouraging participation of faculty, administration, and staff personnel, in both the planning and conduct of research;

6. providing personnel with definitive data (descriptive and/or quantitative) to help them make decisions (p. 58).

Gold (1972, pp. 35,36) reported that an Office of Institutional Research was established at the Los Angeles City College in 1966, with the following purposes and responsibilities:

1. Provide objective and current evidence on how well the college was meeting its stated objectives;

2. furnish information to administration and faculty so that policy decisions and implementation could be based on current and reliable factual data;

3. explore areas in need of research and make appropriate recommendations for conducting it;

4. stimulate, coordinate, and act as consultant for campus-wide institutional research efforts;

5. maintain a library of research materials, including on- and off-campus studies, both for reference and as a background for new studies, and maintain a continuous inventory of Los Angeles City College research studies;
6. recommend regular procedures for gathering and storing desired information;

7. recommend procedures for disseminating information to appropriate individuals and groups; and

8. conduct research studies as advised by the President of the Research Advisory Committee.

Holmes (1976, p.4) suggested the following activities for an Office of Institutional Research at those institutions which are initiating a research program:

1. Conceptualize how institutional research will fit into the administrative structure;

2. write out the mission and philosophy statement for institutional research, and share it with the institutional family;

3. develop job descriptions for each staff person to be employed in institutional research;

4. develop an organizational chart for institutional research;

5. establish a program budget based on the institution's needs;

6. develop specific objectives to be accomplished during the year;

7. establish procedures for evaluating whether objectives have been accomplished.

Tyrrell (1962, p. 92) considered the programming of institutional research as the programming of the unknown. He indicated that an Office of Institutional Research in establishing guidelines for research should define concepts about the institution and its role in human affairs, describe assumptions which may estimate the degree of risk involved in research, and formulate a strategy for the conduct of institutional research.
He offered the following assumptions (p. 93) concerning the institution:

1. Assume the institution is continually strengthening the ethical sensitivity of its members;

2. Assume that effective communication exists between the research staff and the administrators and faculty, with appropriate feedback inherent in all communications. Further, assume communication channels are not in discrepancy with the decision-making channels;

3. Assume that the interests and abilities of the research staff coincide with the demands imposed by the required areas of investigation;

4. Assume that all institutional members will participate in research studies to an appropriate degree; and

5. Assume that opportunities can be created for the research staff to initiate investigations based on intuitive recognition of needs in order to discover unrecognized problems, to study defined problems, and to pursue selected studies.

Tyrrell's (1962, p. 93) third area in establishing guidelines for institutional research was the formulation of a theoretical strategy for conducting research, which is presented as follows:
1. Institutional research should not be just asking and finding answers to questions, but it should also criticize new ideas which are usually born as generalities. These generalities need constructive criticism.

2. The criticism of generalities requires the use of current management science: a generalist's and a specialist's approach. The generalist approach is largely an administrative function that provides an arena of speculation which includes an over-all view of the institution. The specialist approach allows probing, and the verification of a negative or positive value.

3. The generalist and specialist both determine whether a generality has high- or low-order importance. It is one of the responsibilities of institutional research to keep important ideas before the eyes of the institutional community.

4. The element of importance surrounding a generality negates any distinction between what is applied or basic in institutional research. Whatever is considered important is urgent, even though the converse is not always true.

Review of Two Proposed Models for Institutional Research

The method of model development used by Roesler (1972, p.5)
was to select theoretical concepts from a review of literature on institutional research. Questions were developed from these concepts and mailed to a selected jury of experts, and a second questionnaire was developed and mailed to practitioners concerning the state of institutional research.

The jurors received the instrument entitled "Instrument to Develop Guidelines for a Model for Institutional Research in Four-Year Colleges and Universities" (p. 11). The questionnaire entitled "An Instrument to Gather Information Concerning Institutional Research Practices at 100 Colleges and Universities Accredited by the North Central Association of Colleges and Secondary Schools," was developed for the practitioners (p. 11). "The criterion statements in the two instruments were designed to correspond with each other. The results on institutional research theory obtained from the jury instrument, when contrasted with the responses from the instrument mailed to practitioners could reveal similarities and differences between theoretical guidelines and the guidelines relating to practices" (p. 11).

"The validation of the criterion statements was achieved through the use of 'yes' or 'no' response ratings and the standard error of proportion statistical procedure to the responses" (p.11). The Fisher exact probability test was also applied to the paired 'yes' or 'no' responses of jurors and practitioners for each criterion statement. Using the results of the Fisher test, and in some cases a decision by the Director of Institutional Research to accept or not to accept certain criterion statements, the criterion
statements were accepted as part of the Institutional Research Model, or were not used in the model.

The following is an outline of Roesler's Model for Institutional Research at the University of Denver (pp. 200-205):

An Outline of the Guidelines Comprising the Model for Institutional Research at the University of Denver

A. Conceptual Framework for Institutional Research
   1. Use scientific management in institutional research.
   2. Develop procedural criteria for the research process.

B. Organizing and Directing Institutional Research
   1. Determine administrative responsibilities for the Office of Institutional Research.
   2. Coordinate research activities.
   3. Establish an Advisory Committee.
   4. Maintain a file of research materials.
   5. Serve both faculty and administrators.
   6. Participate in the decision-making process.
   7. Hold faculty rank and have an opportunity to teach.
   8. Serve as a member of any administrative council or standing committee.
   9. Have opportunity to serve as consultant to outside groups.

C. Outcomes: Institutional Research Studies and Functions
Areas of Inquiry
1. Administration
2. Finance
3. Systems and Development
4. Public Relations
5. Facilities
6. Curriculum
7. Faculty and Staff
8. Students

Training Programs
1. Conduct research training institutes and workshops for interested personnel.
2. Encourage student research.
3. Offer internships in institutional research.

At the time of Jones' study, Syracuse University did not have an Office of Institutional Research (Jones, 1970, p.9). There was no central data collecting office where all questionnaires could be easily and accurately completed. Thus "a model would be immediately valuable as an instrument to help answer an ever increasing flow of questionnaires" at Syracuse University, as well as "a valuable tool for most large universities similar to Syracuse University" (p. 9).

Jones' model development study was preceded by two pilot studies. The first pilot study was an attempt to determine the nature and scope of problems facing administrators when answering questionnaires. He selected "certain key administrative personnel
within Syracuse University to interview (p. 24). The results of the interviews indicated that changes were needed in the data base and in the handling of information.

The second pilot study included the examination of questionnaires filed in the office of the Vice-President for Public Affairs for 1962-63 and 1966-67, as well as personal interviews. Seventy-five questionnaires for each year were selected, and the selection process was to take every other form (p. 25). The results indicated that the areas of inquiry for most questionnaires could be classified under nine general and six secondary categories. "The general categories were questions, pertaining to faculty, students, library, staff, history, admissions, curriculum, finance, and physical plant. Secondary categories were salary, fringe benefits, alumni, planning, general, and data processing" (p. 26).

The format used in the model development study was similar to the one used in the second pilot study. There were more administrators interviewed in this study than in previous studies. The questions were pointed directly at data handling problems. Each administrator was asked for ideas and suggestions concerning an information model to help answer questionnaires. Also each was asked how he felt about establishing an Office of Institutional Research at Syracuse University. The interviewees agreed that an Office of Institutional Research should be established and all records should be centralized (p. 27).
Further analysis was needed on actual questionnaires and specific questions. The nine general and six secondary categories from the second pilot study offered a convenient starting point. The information obtained from this investigation would be condensed into an information model (p. 28).

Jones commented that "a final model will never actually be achieved because there should be an on-going process of change as the university's needs change." He stated "that a model will be applicable to a majority of data needs at any point in time" even though it is impossible "to build a model which will be one hundred percent applicable all the time" (p. 28). Moore (1965, p.80) commented "that every university has a unique organization so that no model or even clear pattern emerges from the study of institutional research in our institutions of higher education." Gross (1977, p. 33) in his review of institutional research studies arrived at a similar conclusion. The conclusion was based on a lack of agreement on definitions and a diversity among universities (p. 33).

A sample of 75 forms was chosen from each study year. That is, alternate forms were selected until 75 forms per year had been drawn (p. 61). A frequency distribution chart was used to record various types of questions asked on each form. Columns headed by most-often-asked statistics were: "salary, fringe benefits, faculty, students, alumni, library, staff, history, admission, curriculum, finances, physical plant, general, planning, and data processing" (p. 62).
Jones (1970, pp. 88-89) presented a model which should be capable of answering more than 80 per cent of all objective questions received at Syracuse University; that is, the data base should include information on the following general and sub-categories.

Model for Statistical-Type Questionnaires
General and Sub-Categories

1. Students
   a. enrollment
   b. total special
   c. aid

2. Faculty
   a. total faculty
   b. special program areas

3. Admissions
   a. expenses

4. History
   a. founding
   b. affiliation

5. Curriculum
   a. degrees offered
   b. special programs
   c. calendar
   d. closed circuit television programs

6. Library
   a. total volumes
   b. publications and bulletins
7. Physical Plant
   a. new construction
   b. value
   c. capacity
   d. projected buildings

8. Finance
   a. endowment

9. Staff
   a. total staff

10. Data Processing
    a. types of data processing equipment

11. Salary
    a. average salary

Objectives

From a review of the literature it appeared that each individual, practitioner, and administrator had different ideas concerning the aims of institutional research. Thus it was essential to examine objectivess from more than one source.

Tyrrell (1962, p. 92) indicated that the objectives of institutional research should encompass the entire institution. He stated that an Office of Institutional Research should have a frame of reference that philosophically defines the institution and its role in human affairs. He further commented that the office may "find an area of great usefulness in the study and implementation of findings concerning an institution's human and physical networks."
Caution was given against setting too narrow a scope for institutional research objectives by Fenske (1970, p. 16) in his statement that institutional research "must not be identified solely with the mundane, routine data collection and tabulation procedures that are commonly associated with administrative housekeeping." He seemed to feel that the office should "develop a concern for more basic research devoted to a better understanding and critical evaluation of fundamental educational policies and practices."

Stecklein (1966, p. 9) viewed institutional research as a profession that could become an important force in higher education, to the extent that each institutional researcher transmitted an image of solidity and value through research efforts, and to the extent that he clarified what was institutional research. Stecklein (p. 12) felt that institutional research should not be identified simply as operations research for the administration nor solely concerned with theoretical studies of the educational process. It should not be simply data collection and tabulation, but should concern itself with the fundamental issues of education. He believed that institutional research should initiate questions and inquiries, as well as conduct studies or collect data that someone else had requested (p. 12). He contended that an institutional researcher should be a generalist, capable of dealing with and understanding the viewpoints of personnel in all sections of the institution, capable of bringing different viewpoints to bear on problems (p. 12).
He believed that institutional research should (pp. 10-12):

1. Include both faculty and administrators as participants in research;
2. Encompass the entire institution;
3. Work with the faculty to evaluate existing functions and programs, and experiment with new techniques that might be used to improve the education program: quality and efficiency;
4. Evaluate the curriculum for breadth, depth and efficient use of available resources, but not in a theoretical context;
5. Examine basic precepts involved in changing institutional goals or functions.

Dyer (1966, p. 454) characterized institutional research as integrating pure and applied research, and defined the task of institutional research as bringing the faculty and administrators together to define and work at problems of common concern to both groups. According to Dyer (p. 459), institutional research should play a vital role in defining institutional goals and objectives, determining how effectively goals are being met, and identifying factors facilitating or impeding progress toward goals. He indicated that institutional research could lead to a science of institutions if three conditions were met:

1. Real problems were studied within a theoretical framework;
2. More dependable measures were developed;
3. Much more sophistication about how to conduct genuine experiments was developed (p. 466).

Griffith (1938, p. 254) and Dressel (Dressel and Associates, 1971, p. 27) commented that the chief function of an Office of Institutional Research should not just answer questions or become involved in repetitious routine activities, but should ask questions and encourage faculty and administrators to think about the operation of the institution. Griffith (p. 254) and Dressel (p. 26) felt that the office should know the history of the institution and its environment, and it should recognize developing trends and changes. Also, it should formulate questions based on trends obtained from data about students at the beginning of each term, and these questions should be addressed to the individuals concerned through the president, so that the administration was aware of what it was doing, and why.

Martin (1971, p. 224) stated that "college and university research units should be crucial instrumentalities for the determination of institutional priorities and management objectives".

Areas of Institutional Research

According to Brumbaugh (1960, p. 2), institutional research consisted of studies and investigations that were focused on current problems and issues in institutions of higher education. These problems and issues may be basic to long-range planning, or "may ultimately have implications for institutional operations."
One of the first steps in designing long-range research plans is to develop a structural outline into which specific projects may be placed. The institution may not wish to become involved in all projects at the same time, but it is wise to have an overview of the total field and then decide which projects will be started first.

This section of the literature review presents a chronological survey of different general areas into which institutional research may be organized. Brumbaugh (1960, p. 8) organized institutional research into the following general categories: "goals, students, faculty, facilities, administration, finance, and public relations."

Thousands needs tend to tempt the institutional researcher to dash off in many ways, and all at the same time (Littlefield, 1960, p. 247). He commented that this was an approach that the community college leadership must not condone. He pointed out that the criteria to be used in determining priorities for research became clear if the researcher considered the kinds of students to be served, the types of programs which would meet the needs of the students, the characteristics of the faculty that were needed, the basic administrative organization, physical facilities, and the financial resources required to serve the students (p. 247).

Administrators of junior colleges are beginning to realize the importance of institutional research in identifying the types of students which attend these institutions (Browning, 1961, p.
This information enables the institution to evaluate its basic philosophy and purpose, the first step in an evaluation of the course offerings.

Port Huron Junior College initiated the following studies in 1957 (Browning, 1961, pp. 44, 45): (1) "enrollment and class distribution;" (2) "origins, background and characteristics of students;" (3) "academic comparison of students;" (4) "survey of facilities;" and (5) survey of professional personnel living in the county, who had attended Port Huron, to determine the adequacy of their college preparation. The results of the studies were very helpful in the evaluation of course offering by the faculty (p. 46).

The Office of Institutional Research at Florida State University has conducted the following type studies (Stickler, 1961, p. 545):

(1) administrative problems and procedures, (2) budget and factors related to budgets, (3) class size analyses, (4) operational costs and factors related to costs, (5) curriculum, (6) degrees awarded, (7) enrollment analyses and projections, (8) grading practices, (9) instructional staff, (10) faculty salaries, (11) space inventories and space utilization, (12) student ability studies, (13) student characteristics and backgrounds, (14) student costs, (15) student progress, (16) faculty loads, (17) time utilization, and (18) studies of transfer students.

A literature survey was conducted on all writings in the field of the two-year college published in periodicals, as reported in the Education Index between September 1950 and June 1960 (D'Amico, and Martorana, 1962, p. 293). A screening process eliminated duplicates and articles which were not reports of research. The following is a rank-order list of research categories.
obtained from articles written by Junior College faculty (57), and administrators (178): "students (41), curriculum (41), aims and objectives (36), instruction (31), internal administration (24), external administration (18), libraries (16), instructors (11), enrollment and statistics (6), finance (6), and rating and accreditation (5)" (p. 295). The numbers in parentheses are the number of articles per category.

Corbman (1962, pp. 340, 341) indicated that the adoption of a program of periodic evaluation of the curriculum would contribute to the vitality of the curriculum and the stature of the community college as a progressive force in higher education; that is, such evaluations would be valuable to college officials and faculty, related professions, or industries, students, and the public.

In April 1961, Johnson (1962, p. 370) asked 124 chief administrators of junior colleges located in thirteen western states to "list the titles of representative investigations made at their colleges during recent years" (p. 374). He received responses from 100 of the institutions and their responses are rank-ordered as follows: "students, curriculum, enrollment, faculty, admission, plant, administration and organization of the institution, finance, and relationships with outside agencies" (p. 374).

Mayhew (1966, pp. 4-6) stated that institutional research must assume its role in shaping higher education by turning its attention to unsolved problems faced by higher education. Some of the problems were as follows: (1) the economic viability of
private education; (2) factors that aid or hinder growth of an institution; (3) the affect that size and administrative structure have on the speed of the decision-making process; (4) teaching the non-traditional student; (5) balance between teaching, research, and services; (6) graduation rates in community colleges; (7) student values and emergent trends in college education; (8) relation of learning to future employer expectations; (9) changing role of student and faculty to traditional classroom activities; and (10) development of methods to satisfy the possibly incompatible demands of education for an elite group, and education for all. To meet these challenges, the institutional researcher should remember that more data and research must be published, and that he must make recommendations for administrative and practical implementation based on his research rather than the administrators having to rely on someone else drawing the inferences (p. 6). Also, the institutional researcher was urged to try to understand the educational policy of the institution in the broadest sense and to seek ways of injecting research and research evidence into it (p. 7).

The Clearinghouse for Junior College Information began operation in the summer of 1966 with emphasis on obtaining and making available studies which had not been published, and/or had not had wide dissemination (Rouche, 1967, pp. 20,21). By the time of Rouche's investigation in 1967, the Clearinghouse had processed approximately one thousand documents (p. 21).
Although some valuable research had been done, there were certain gaps in the types of research, problems studied, and focus of research (p. 21). Typically, studies of students emphasized performance after transfer, but did not assess causes of good or poor performance, nor did they draw inferences or conclusions for modifying the junior college program (p. 21).

The need for further research on drop-outs was summarized as follows:

1. What do students gain from attending junior colleges for one semester or one year?
2. Do students gain anything from enrolling in junior college and withdrawing prior to completing one semester?
3. What happens to students who are dismissed because of poor scholarship?
4. Is student drop-out a serious problem?
5. Why do students withdraw from college?
6. How may the drop-out rate be reduced?
7. What values do students possess that cause them to make early or late, wise or unwise, effective or ineffective career decisions? (p. 21).

The curriculum studies typically covered departmental program descriptions, surveys of other institutions, and feasibility studies for new programs, but there seemed to be little evaluative research on specific programs for low-ability students (pp. 21, 22). The experimental program categories were:

1. Status studies of experimental programs at other institutions;
2. summary statements of rationale provided and procedures followed in the establishment of an experimental program;
3. evaluation studies of comparative instructional approaches; and

4. controlled experimental research projects (p. 22).

Roueche (1967, p. 23) commented that there was a need for research in classroom testing. He felt that the relatively small number of research studies on classroom testing may be due to the faculty using their prerogative to construct their own tests. Despite this, he believed that teachers should attempt to answer some basic questions:

1. For what purpose are tests given?

2. Are test questions primarily geared to recall of course content?

3. Do tests really assess achievement of course goals?

4. How might experts in test construction aid teachers in designing effective tests?

The Clearinghouse for Junior College Information at the University of California Los Angeles mailed an inquiry questionnaire to 3,700 persons in April 1967 in an effort to determine the characteristics of information needed by junior college educators. There were 1,000 responses to the questionnaire (Mathis, 1967, p. 24). The responses indicated that nearly three-fourths ranked curriculum and instruction as a primary information need, and one-half were interested in specialized information on curriculum design and improvement (p. 24).

"Although junior college educators profess a strong interest in various aspects of curriculum and instruction, it is apparent from the nature of the acquisitions received in the Clearinghouse for Junior College Information that they give little
attention to either the development or the application of research in this area" (Mathis, 1967, p. 26). "All evidence indicates that junior college leaders are aware of the need for systematic curriculum evaluation," but the limited research conducted bears little evidence of an evaluation orientation; that is, "there is little indication that current research in the area of junior college curriculum results in program modification based on specific research findings and recommendations" (Roueche, 1967, p. 22).

Other areas of information needs were: conference speeches and workshop reports, student characteristics, educational technology, and conducting and guiding research activities (Mathis, 1967, p. 25).

Roueche and Boggs (1968, pp. VII, VIII) conducted a state-of-the-art study of institutional research in American Junior Colleges for the ERIC Clearinghouse for Junior College Information. They surveyed 83 randomly selected junior colleges using a structured interview technique via telephone. Of the 83 selected colleges, 70 reported on their current research projects. The areas of research emphasized most often were: "students, curricula and programs, institutional operations, faculty, student personnel services, other, and instruction" (p. 40).

Dressel (Dressel and Associates, 1971, p. 31) classified the areas of institutional research under three major topics: "the institutional environment, the processes and operations carried on in that environment, and the ultimate outcomes achieved."
According to Perry (1972, pp. 752,753), if institutional research was to fulfill its role as a vital force within the institution, it must demonstrate competence in evaluating academic programs. He believed that institutional research should become involved in the following activities: (1) conduct evaluation which would give a full explanation of the benefits accruing to students and the society in which they will serve; (2) demonstrate the consequences, to society, of alternative plans for different educational programs; (3) develop research designs and methodologies which may be used to project the quality of student and society which should be created; (4) "take the lead in demonstrating to the decision centers outside the academic community which are creating educational policy what the consequences of their efforts will mean in terms of the quality of life available to our society" (p. 752); and (5) evaluate the value structure and orientation of education, and as a result of this endeavor, justify the criteria which may be used by decision-makers to decide what kinds of educational programs would be made available.

Gold (1973, pp. 32a-32d) presented the following list of functions which the institutional researcher may perform to assist in the over-all administration of the college:

1. Identify trends
   a. enrollment
   b. incoming student aptitudes
   c. entrance test performance or high school performance
d. grading practices  
e. characteristics of graduates  
f. distributions of declared majors  
g. library utilization  
h. changes in employment  
i. influx or egress of classes of people  
j. high school graduation rates  

2. Evaluate programs and procedures  
   a. define and measure the attainment of program goals and objectives  
   b. examine routine procedures necessary to the college's operation  
   c. aid in faculty evaluation  

3. Student placement in courses and curricula  
   a. investigate relationships and identify factors related to student success in particular programs  
   b. recommend use or non-use of certain instruments in student placement  
   c. suggest acceptable ranges of performance on instruments selected for use  
   d. perform correlational studies to assist in determining appropriate cutoffs  

4. Follow-up studies  
   a. Did students achieve their goals?  
   b. How well did they perform?  
   c. What happened to the drop-out?
What can the community college administrator expect from institutional research? As an outgrowth of the performance of the above functions, the administrator can expect to have at his disposal 'relevant, factual data' to help him 'ask the right questions and then to find the right answers.' He can expect understandable reports to help him anticipate problems not yet visible and to help solve those already pressing.... He can expect his administrative decisions to be influenced by his increased awareness of what is really going on around him, to have a greater chance of being sound and constructive, and of being accepted (p. 32d).

Chick (1974, p. 1) visited eight selected community colleges with offices of institutional research in Michigan, Illinois, and Ohio. One of the questions was, "What institutional research projects are currently being given high priority by you and your staff?" (Exhibit A). The six most often listed projects in rank order were: "student follow-up studies, program feasibility studies, community attitude toward college, management information systems, manpower needs for enrollment projections, and instructional program evaluations" (p. 4).

"During the Fall and Winter Quarters of the 1973-74 academic year, the Office of Institutional Research at DeAnza College" sent questionnaires to 1150 public and private community and junior colleges. The primary purpose of the study was to determine if any changes had taken place in the types of research conducted by community colleges (Platt, 1975, p. 30). The results
of the ERIC study in 1968 were presented by Roueche and Boggs and have been referred to previously in this section.

There were approximately 460 responses received from the colleges with 282 reporting some type of institutional research (p. 30). The colleges reported on studies completed in the past two years, as well as current research. The areas of emphasis within the past two years in rank order were: "students, institutional operations, faculty, student services, curricula and programs, continuing education and instruction" (Platt, 1975, p. 35). One important change was "curricula and programs" moved from second place in 1968 to fifth place in 1973 (p. 35). The areas of current research were: "institutional operations, student services, faculty, curricula and programs, and continuing education" (p. 35). In the areas of current research, the report indicated that changes were still taking place; that is, institutional operations replaced students as the number one area and student services replaced the faculty as the number three area of study (Platt, 1975, p. 35).

Korim (1976) in his key-note address at the annual meeting of the North Central Region of the American Education Research Association for Junior College Research presented the following general demands that may be placed upon the community college in the third century:

1. The college may have to serve a broader array of people than it serves today and with more attention to specific needs;

2. It may have to justify its existence "as a comprehensive, community-based institution, including the efficacy of programs and services offered;"
3. it may have to "develop new organizational arrangements for providing community benefits" (p. 4).

The cumulative effect of these demands may require the researcher "to stray quite a bit from what is known as institutional research into what might be called community research. The extension of the community college out into the community serving new clients under new kinds of arrangements and performing new roles may require the research office to develop new skills and to take on new assignments" (p. 15).

According to Alfred, Fremer, and Lightfield (1977, p. 32) "institutional research has been primarily a staff function, usually reporting to an administrative office and responsible for little more than routine data collection and background information." They seemed to feel this situation had changed and "research was becoming a planning and management tool, the primary aim of which was to assist institutions in achieving their goals."

The group sent questionnaires to 900 community college presidents with the purpose of examining the role of institutional research in the community college. They received 240 responses: 132 had a research office and 92 assigned the research function to another office as an additional responsibility (p. 32). Of the 108 institutions that did not have an Office of Institutional Research, 52 indicated that they planned to establish a research office (p. 32).

There seems to be some confusion among the presidents and the researchers concerning the role of institutional research. The
presidents reported the following tasks as those most often performed by the research office: "answering and routing questionnaires, information coordination with state/federal agencies, HEGIS and other external reporting, and data collection and interpretation" (p. 33). On the other hand, the presidents thought that the researchers should be performing the following tasks: "institutional planning, follow-up studies, program evaluation, developing management information systems, and data collection and interpretation" (p. 33).

The presidents were asked to make a list of issues that were related to college management which they felt should be of concern to institutional researchers. "The following issues were most identified as those that should be of concerns to researchers:

1. Fiscal management and cost analysis;
2. Long-range planning;
3. Institutional accountability;
4. Institutional goal assessment;
5. Community needs assessment and college impact;
6. Need for program evaluations;
7. Data and information management; and
8. Student characteristics analysis" (p. 34).

The presidents indicated that the researchers did not always agree with their appraisal of institutional needs. This may be due to the researcher's preparation and skills requirement to become an institutional researcher. The following is a list of "core skills" the presidents felt the researcher should possess:
1. Methodology and statistical skills;
2. Knowledge of higher education and management;
3. Communications skills;
4. Analytical skills;
5. Human relations skills;
6. Data collection and management information skills;
and
7. Computer and data processing skills (p. 34).

The researchers may not have all of these requirements. Some of the practicing researchers have been trained in one or more of the following areas: sociology, psychology, economics, business, political science, mathematics, statistics, and law (Dressel and Associates, 1971, p. 315).

It seems that "most researchers find themselves inundated with internal and external reporting responsibilities as well as data collection activities," but the presidents seemed to view institutional research as a planning and management function (p. 34). "If research is to be successful, these competing roles must be merged into one" (p. 34).

Summary

A summary of the literature review related to organization, objectives, and areas of inquiry in institutional research follows.

Organization

A centralized Office of Institutional Research seems to offer more uniform control over research programs and the
dissemination of information than a decentralized approach. It allows participation by different members of the institution, plus consulting service by institutional research staff members for those who need technical and methodological help. A centralized orientation allows the Office of Institutional Research to assume a coordinating staff role in comprehensive planning since it is the focal point for institution-wide data collection and is equipped with skills in the methods of research and analysis, as well as having the understanding of the relationships between programs and resources. It should be remembered that the role of institutional research in decision-making is a staff service function. It is the research office which provides the president, vice-presidents, deans, department chairmen, and faculty committees with information to generate institutional policies and plans. The research office may make recommendations, submit alternatives, and point out their consequences, but it should not become involved in policy implementation. There may be times when it is essential for the research office to become involved in policy implementation, but this should not become a practice of the office.

In developing a program of institutional research, an institution should consider several guiding principles, some of which may be as follows:

1. Institutional research should be adequately financed.

2. There should be an advisory committee for institutional research.
3. The director of institutional research should report to the president.
4. The director should develop job descriptions for each staff member who may be employed in institutional research.
5. The director should develop specific objectives to be accomplished during the year.
6. The director of institutional research should be a member of any administrative council.
7. The director and his staff should give constant study to institutional problems and make suggestions concerning problems which the office, because of its position, sees on the horizon.
8. The office should clarify definitions and develop procedural standards which would provide greater consistency in the gathering, storing, and maintenance of data.
9. Institutional research should be planned.
10. The office should develop priorities for proposed research.
11. There should be wide participation by faculty, staff, and administrators in the research process.
12. Each potential researcher should submit his topic and an outline of its scope to the Office of Institutional Research before he begins the study.
13. A copy of the completed study should be submitted to the research office to be placed in the research library.

14. The research office should keep all personnel informed about institutional studies in progress or completed within the institution.

16. The research office should collect data which is needed for the development, evaluation, and control of operations.

17. The office should submit information to the administration and faculty so that policy decisions and implementation may be based on current and reliable factual data.

18. The office should develop criteria to evaluate the institutional research program.

19. The office should provide objective and current evidence on how well the institution is meeting its stated objectives.

20. All questionnaires received from external and internal groups should be handled by the Office of Institutional Research. This assures that answers to questions will be uniform and accurate.

Objectives

College presidents and institutional research practitioners tend to have different ideas about the aims of institutional research. The following is a partial list of institutional
research objectives that may be used by an Office of Institutional Research:

1. The Office of Institutional Research should have a frame of reference that defines the institution and its role in human affairs.
2. Institutional research should encompass all areas of the institution.
3. The research process should involve both faculty and administrators.
4. It should develop concern for basic research devoted to an understanding and critical evaluation of fundamental educational policies and practices.
5. It should evaluate the curriculum for breadth, depth, and efficient use of available resources.
6. It should become aware of developing trends and changes, and should formulate questions based on trends obtained from an analysis of data collected on students, faculty, curriculum, etc.
7. The research office should initiate studies as well as conduct studies for other groups.
8. It should determine institutional priorities and management objectives.
9. It should help define institutional goals and objectives.
10. It should examine basic precepts involved in changing institutional goals or functions.
11. It should determine how effectively the institutional goals are being met.

12. The Office of Institutional Research should not limit itself to data collection, tabulations, and filling out questionnaires received from external and internal groups.

Areas of Institutional Research

The following are general areas into which institutional research may be organized:

1. Current problems and issues of higher education
2. Institutional goal assessment
3. Students—ability, characteristics and background, costs, progress, transfer, drop-outs
4. Faculty—characteristics, load, salaries
5. Curriculum
6. Facilities
7. Administration
8. Finance
9. Public Relations
10. Class size
11. Operational costs and factors related to costs
12. Degrees awarded
13. Enrollment analyses and projections
14. Grading practices
15. Aims and objectives
16. Instruction
17. Factors that aid or hinder growth of the institution
18. The effect that size and administrative structure have on the speed of the decision-making process
19. Teaching the non-traditional student
20. Student values and emergent trends in college education
21. Relation of learning to future employer expectations
22. Changing role of student and faculty to traditional classroom activities
23. Classroom testing
24. Incoming student aptitudes
25. Entrance test performance
26. High school performance
27. Characteristics of graduates
28. Changes in employment
29. Migration patterns
30. Fiscal management and cost analysis
31. Long-range planning
32. Institutional accountability
33. Community needs assessment
34. Program evaluation
35. Data and information management

The present literature review has been an attempt to highlight guiding principles for the organization of an Office of Institutional Research, outline objectives for the office, and suggest areas of research for the Office of Institutional Research.
CHAPTER III

METHODOLOGY

As stated in Chapter 1, the purpose of this study was (1) to develop a proposed Institutional Research model for Lake Michigan College; and (2) to determine the informational needs of Lake Michigan College.

Informational Needs Related to Institutional Research at Lake Michigan College

Administrators

In order to determine the informational needs of the administrators (appendix A) in the area of institutional research, unstructured personal interviews were conducted with the president, vice-presidents, and deans. The interviews were conducted with the use of a cassette recorder, and then were transcribed and returned to the administrators (appendix B) for review and ranking in the order of importance. The perceived needs were compared with available data sources, and those needs which were not being met were further analyzed to determine if it were possible to obtain the necessary data.

Faculty

A Faculty Inventory Questionnaire (appendix C) developed by
Garner (1970, p. 71) was used to solicit information from the faculty. He distributed his questionnaire to the faculty, students, and administrators at Ohio Northern University. It had applicability for the present study and was used with necessary modifications to solicit information from the Lake Michigan College faculty.

The questionnaire contained four parts. Part 1 had four closed-answer questions of personal information regarding the respondents, namely: primary relationship to Lake Michigan College (full-time or part-time faculty); number of years completed at Lake Michigan College; major academic area; and academic rank.

Part 2 asked for responses to seven questions dealing with present opinions of institutional research of those involved:

1. The degree of the faculty's present understanding of the role and function of institutional research.
2. The source of their present understanding of the role and function of institutional research.
3. The faculty's desires and expectations for institutional research.
4. The faculty's reservations and cautions about institutional research.
5. The degree of cooperation and support expected from the faculty.
6. The degree of resistance expected from the faculty.
7. The potential value of institutional research for Lake Michigan College.
Two of the questions (on wants and expectations, reservations and
cautions) were open-answer type, and the others were closed-answer
questions.

Part 3 dealt with suggested areas for institutional
research. The general categories of institutional research topics
and examples were given. In the spaces provided under the various
categories, the faculty members were asked to list suggestions
which they felt would be valuable research to be conducted at Lake
Michigan College. They were asked to use the examples given as
stimulators; they could select from the examples as they chose, but
were encouraged to give answers that represented their personal
thought and selection.

Part 4 contained an inventory of current data. The faculty
were to indicate the existence of any reports or summaries which
had been compiled by them on an occasional or regular basis.

The analysis of the data from the Faculty Inventory
Questionnaire was descriptive; that is, there were no inferential
statistics used. The "hopes and expectations" the faculty members
had for institutional research at Lake Michigan College were
recorded. The faculty members' suggested areas for institutional
research were also recorded since the areas were designed to be
similar to the expected needs of the administrators. This does not
mean that the designed suggestions for research were in agreement
with the stated needs of the administrators, which were not known
until after the personal interviews. The faculty members were able
to suggest areas of research not included in the questionnaire.
The third section of data examined was Part Four of the questionnaire which referred to current research being conducted by the faculty members.

Material Relating to Policies and Procedures

Further information was obtained from a selected group of institutions of higher education (appendix D) concerning research policies that they were using to guide their institutional research programs. A letter (appendix D) was sent to 51 institutions of higher education that had published articles about institutional research or were referred to in the bibliography of an article as being involved in institutional research. Each Director of Institutional Research was asked to send a copy of the policies of his school relating to institutional research, and any other information concerning institutional research activities that he had available.

Model Development

The first aspect of the purpose was to develop a proposed Institutional Research Model. According to Lippit (1973, p. 2):

A model is a symbolic representation of the various aspects of a complex event or situation, and their interrelationships. A model is by nature a simplification and thus may or may not include all the variables. It should include, however, all those variables which the model-builder considers important and in this sense, models serve as an aid to understanding the event or situation being studied. The true value of a model lies in the fact that it is an abstraction of reality that can be useful for analytical purposes.
The following are steps in developing a model (Lippitt, 1973, pp. 83-85):

1. Prepare a description of the situation.
2. Identify the essential variables.
3. Establish the symbols to be used.
4. Identify alternative courses of action.
5. Validate the model.

The proposed Institutional Research Model was developed from information obtained through the review of literature and from a selected group of institutions which were involved in institutional research.

Selection of the Panel

In order to determine the appropriateness of the model, a panel of institutional researchers was selected to critique the proposed model. The panel (appendix E) was drawn from the group of directors of institutional research who had responded to the inquiry for information about institutional research policies. The directors were also members of the Association of Institutional Research. Two members of the panel were past presidents of the Association of Institutional Research and one panel member was a member of the Association's executive committee. A fourth panel member had become Chairman-Elect of the Kansas section of the American Mathematical Association.
CHAPTER IV

REPORT OF RESPONSES AND DOCUMENTS

Perceived Needs That May Relate To
Institutional Research

Perceived Institutional Research Needs
of the Administrators

Unstructured personal interviews were used with the chief administrators at Lake Michigan College to determine their informational needs that might be related to institutional research. The interviews were conducted with the use of a cassette recorder, and later transcribed. The results were returned to each administrator for his review. The administrators were asked to rank their responses in order of importance. A summary of the results was made using the general categories of the Faculty Inventory Questionnaire as a guide. The general categories of the Administrators' perceived needs that related to institutional research are as follows: students (17), faculty (4), administration (1), curriculum and library (10), teaching methods and instruction (14), space and facilities (3), budget and finance (12), admissions and enrollment (3), public relations (2), community characteristics and outreach (10), and other (24). The numbers in parentheses are the percent of perceived needs per general category. A complete list of the items which the administrators suggested and ranked is given in table 1 of appendix F.
At the present time the only available data base is generated from the college's registration form. Thus it became the primary source of information in the comparison of perceived needs with available data sources.

The registration form at Lake Michigan College (Summer 1977) included the following:

1. Student Information
   a. Name
   b. Birthday
   c. Sex
   d. Marital Status
   e. Racial Characteristics

2. First time in college

3. Attended Lake Michigan College last semester

4. Returning student, but did not attend Lake Michigan College last semester

5. Transfer student

6. Veteran status

7. High school, state, year graduated

8. Cumulative college credit prior to this registration
   a. 0-27 credit hours
   b. 28 or more credit hours

9. Tuition

10. Total semester hours registered for this semester

11. Field of study with cost center codes

12. Courses which charge extra fees
13. Optional
   a. Residence
   b. Parents' education
   c. Your future plans
   d. Family income
   e. What person was most influential in your attending Lake Michigan College?
   f. Hours employed per week outside the home.
   g. Most important reason for attending Lake Michigan College.
   h. Most important reason for selecting Lake Michigan College.

The administrators' perceived needs were compared with the information obtained on the registration form, and there seemed to be many more needs than the data base covered; therefore an analysis was made of the type reports generated from the data base.

The reports generated (Cowden, 1978) are as follows:

1. Grade analysis:
   a. Student status
   b. Course identification
   c. Grade distribution

2. Class status:
   a. Withdrawal: no grade, passing, failing
   b. Incompletes
   c. Failures.
3. Part-time and full-time students:
   a. Withdrawal
   b. Incompletes
   c. Failures

4. Withdrawal dates for drop-outs

5. Faculty load report

6. Credit hours and contact hours by teacher

7. Curriculum report:
   a. Enrollment by curriculum
   b. Race and sex by curriculum

8. Male versus female:
   Full-Time Students
   a. First-time freshman
   b. Other first-year
   c. Second year
   d. Unclassified

   Part-Time Students
   a. First-time freshman
   b. Other first-year
   c. Second year
   d. Unclassified

9. Enrollment by state

10. Enrollment by credit hours

11. Credit hour by class and residence while attending college

12. Race and sex by class

13. Federal race report
14. Semester hours attempted
15. Semester hours earned
16. Accumulative Dean's List
17. Semester Dean's List
18. Potential graduate list
19. Arts and Science: non-returning student list
20. Print-out of course file
21. Print-out of course and section file
22. Print-out of section file

There are reports that could be generated from the data base, but are not being used at the present time. These reports are:

1. Continuing education:
   a. Student lists
   b. Full-time and part-time students
   c. Student status
   d. Enrolled for specific curriculum
   e. Mailing labels
   f. Grade analysis
   g. Withdrawals
2. Credit hours and contact hours by course
3. Majors for each student
4. Residence and sex by curriculum
5. Age distribution of students
6. Cost center and course number classification

The following perceived needs may be met by an analysis of the present data base:
1. Grade analysis by individuals and by program division

2. Student records:
   a. How many students took courses offered and what were the results?
   b. What was the number of drop-outs per week, at end of mid-term, and at the end of the semester?

3. Faculty work load

4. Studies on grade distributions

5. Credits generated by each department within the Arts and Science Division

6. Credit hours and contact hours on every course within the division

7. What is the trend towards Vocational-Technical as opposed to the Arts and Science area?

8. What related subject programs do the Vocational-Occupational students take?

9. How many classes does a student attend, and how many does he skip?

10. Which classes have heavy attendance, and which have poor attendance?

11. Student profile on those who enter and graduate

12. Majors for each student

13. Age distribution of students

14. Cost center and course number classification

The present data base meets approximately 8.7 percent of the administrators' perceived needs.
Perceived Institutional Research Needs of the Faculty

A Faculty Inventory Questionnaire was distributed to the total faculty (268) at Lake Michigan College. Responses were received from 8.6 percent of the faculty. Due to time and staff constraints, the questionnaire was not distributed until the end of the spring semester. The responses are not considered as representative of the total faculty, but represent only the responding faculty members.

Sixty-one percent of the respondents were full-time faculty and thirty-nine percent were part-time faculty. The number of years of service ranged from less than one year through twenty years' service. The only major academic area not represented was Social Science, but all the academic ranks were represented with sixty-one percent of them being instructors.

Except for the brief demographic information, the only other information used from the questionnaire related to the faculty's perceived institutional research needs. The only question used from part 2 of the questionnaire "Present Opinions" was number three. "Based upon my present understanding of the role an function of institutional research, these are some of the hopes and expectations which I hold for its contribution to Lake Michigan College." The responses are as follows:

1. Make certain that the courses offered are appropriate to the needs of those being served.
2. Clarify that curriculum evaluation will also evaluate the appropriateness of text books being used.

3. Develop channels of communication so that knowledge is shared among staff members and eventually power will be shared.

4. Direct educational programming toward the market for graduates.

5. Determine the viability of existing instruction, also provide help so that the faculty may plan new curricula.

6. Develop more consistency and continuity in programs of study within a department.

7. Present a clear view of the present status of all areas of the college, and a long-range view of where the college could be.

8. Study the community educational needs of:
   a. High-school students
   b. Employees of business and industry
   c. Unemployed
   d. Housewives
   e. Underemployed

9. Provide facts upon which to plan teaching programs including the students' perceived needs when admitted to the college, and at graduation or termination of study.
10. Provide a better profile on admission requirements per department.

11. Provide research to improve programs being offered by giving input to areas that may need changing.

12. Determine educational priorities, cost effective educational practices, and provide a resource for pursuing additional funding for educational programs.

13. Provide research that will assist in the expansion of curriculum which may better serve the students and employers.

14. Assess college goals, priorities, and improve communication.

15. Clarify educational goals so that criteria may be developed to evaluate the goals and objectives, and determine when they have been met.

16. Provide research that will lead to a better educational institution.

In part 3 of the inventory questionnaire, there were ten general categories for institutional research and specific examples of typical kinds of studies for each category. The faculty members were encouraged to list their own suggestions, or they could select from the examples if they felt the examples were appropriate.

Table 2 in appendix F gives a summary of the topics suggested in each of the ten categories: goals and objectives, students, faculty, administration, curriculum and library, teaching methods and instructions, space and facilities, budget and finance, admissions and enrollment, and public relations.
In part 4, "Inventory of Current Data", the faculty members indicated the studies conducted by their respective departments on a one-time basis, on an occasional basis, or whether the study was on a regular basis. The following is a list of studies as reported by the faculty:

1. One-time compilation:
   a. End-of-semester summary of weekly outlines and objectives.
   b. BIDP-AIDP input.
   c. Relationship of graduates to reading ability.
   d. Grade distribution.

2. Occasional compilation:
   a. Grades.
   b. Course enrollments.
   c. Coordinate trade-related instruction on information needed.
   d. Graduate survey.

3. Regular compilation:
   a. Weekly grades for class.
   b. Annual clinical log sheet of hours of experience and study.
   c. Co-op student evaluation.
   d. Teacher evaluations.
   e. Annual department report (3).
   f. Teacher load.
   g. Budget.
4. Other compilations:
   a. Grade distribution per course for a five-year period.
   b. Student enrollments per course for a five-year period.
   c. Majors of students.
   d. High school distribution in specific classes.
   f. Follow-up on graduates from a second-year course.
   g. Laboratory instrument use and maintenance.

Review of Material Relating to Institutional Research from a Selected Group of Institutions of Higher Education

A set of guidelines for the organization, objectives, and areas of institutional research are presented in Chapter 2, but this was only one part of the evaluation of organizational structure, and policies and procedures for institutional research. A part of the evaluation procedure involved correspondence with 51 institutions of higher education which had published articles about institutional research or were referred to in the bibliography of a report as being involved in institutional research. Replies were received from 28 of these institutions, and the mimeographed material they sent became the literature discussed below.

Governance Structures

The following is a list of offices within the institution to whom the Director of Institutional Research reported:
1. Director of Institutional Research (Dean of Administration) was responsible to the President (Harcum Junior College).

2. Director of Institutional Research reported to the President (Stephens College).

3. Director reported to Director of Planning and Budget who was responsible to the Senior Vice-President for University Development and Relations (Pennsylvania State University).

4. Director reported to Vice-President of Academic Affairs.

5. Director reported to the Executive Vice-President (Georgia State University).

6. Assistant Director of Institutional Research reported to the Director of University Computing and Information Systems (Oklahoma State University).

7. Institutional Research was part of the Office of Budgeting and Institutional Studies (University of Massachusetts).

8. Director reported to the Dean of the College (Oakwood College).

9. Director reported to the Vice-President for Academic Planning and Research (University of Southern California).

10. Dean of Institutional Research and Analysis reported to the Executive Assistant to the President (Montgomery Community College).
There does not seem to be any governance pattern for institutional research among these institutions. There were two institutions where the Director of Institutional Research reported to the President (Harcum Junior College, and Stephens College), three reported to the Vice-President of Academic Affairs (The University of Alberta, Johnson County Community College, and The University of Michigan); otherwise, each institution had its own governance structure.

Two of the institutions used a decentralized approach to Research (Indiana University and McGill University), and in a third institution the Office of Institutional Research shared research responsibilities (Manatee Junior College). For example, the Student Personnel Office conducted placement and follow-up studies, the Registrar and Admissions Officer prepared enrollment reports and projections, and the Business Officer was responsible for all financial reporting and planning (Manatee Junior College).

The other nine institutions indicated they had a centralized Office of Institutional Research; that is, they coordinated the studies, were responsible for the approval of each study and approval of the results before they could be published. The offices kept copies of each study completed for future reference.

Policies, Procedures, and Guidelines

Six of the 28 responding institutions indicated they did not have any written policies and procedures relating to
institutional research. Those institutions which sent material that was applicable to the present investigation provided a valuable body of information which contributed to a better understanding of institutional research. Pertinent information recorded from these materials is presented below.

Some of the basic guidelines for institutional research at the University of Alberta (1976) were:

1. While the prime responsibility is for university-wide studies rather than faculty or departmental, this does not preclude Institutional Research and Planning from assisting faculties, department, or university affiliated groups with projects.

2. The Office reserves the right to determine the most appropriate manner in which projects are to be conducted.

3. Unless specifically requested, recommendations are not made. Rather, the Office provides data and/or alternatives.

4. In general, release of any data or reports must be approved by the User.

5. Projects must be approved by the Director of Institutional Research and Planning or Vice-President of Academic Affairs (Section 203, page 1).

Procedures for institutional research at Johnson County Community College were:

1. Research projects "for the purpose of instructing students in a course must be approved by the appropriate division director."

2. Projects not for instruction of "students in a course must be approved by appropriate division director and branch administrator."
3. For those projects which do not require "the assistance of the Office of Institutional Research, a memo must be sent by the coordinator of the project to the Director of Institutional Research summarizing any sample used and purpose of the study so that inquiries from students, college staff, or persons in the community, can be answered."

4. Research projects coordinated and completed by a non-institutional research staff member, "but which cite the research staff as providing assistance must be approved as follows:

a. The reference in any written report must be approved by the Director of Institutional Research prior to printing.

b. Written reports released to non-college staff must follow the style adopted by the Office of Institutional Research.

c. Any verbal report given in lieu of a written report must have the reference approved by the Director of Institutional Research."

5. "Surveys and other research coordinated and completed by the Office of Institutional Research will be undertaken on a priority basis."

The policy of the American River College related to institutional research directs the investigator to send his request for conducting research to the Committee on Institutional Research for their review, and for them to notify administrative personnel and division chairmen if the request is approved. This includes individuals within the college and outside agencies.
Their general guidelines applying to research requests were as follows:

1. The proposed research study must have the potential of benefiting the college and making a contribution to education. It must be replicable, non-trivial and not self-serving.

2. The research study must be sound in terms of design, sample selection, instruments to be used, statistical treatment and evaluation. Personnel, time table of procedures and plans for distribution and use of results should be clearly detailed.

3. The study must be submitted for approval to the American River College Institutional Research Committee if:

   a. it involves institutional records;

   b. it is to be conducted and reported by a non-staff member; or

   c. it is to be conducted off campus by a staff member in the name of the college.

4. The study must be carried on by, or be supervised by, a person with research qualifications; that is, the Dean of Research or an individual approved by the Institutional Research Committee.

5. The study must not impose undue burdens on the college, its administrative, clerical or teaching staff....There must be reasonable assurance that the project can be completed within the projected time.

6. If the study deals with an area which, through custom or statutory authority, is generally regarded as personal or optionally private, this must be stated explicitly at the time the proposal is submitted. Copies of all instruments must be provided and approved beforehand.

7. A complete report of results must be made available to the American River College Institutional Research Committee before it is made public.

The University of Toronto has a very extensive set of Research Policies. A general outline of their policies follows:
1. General application guidelines for all grants and contracts:
   a. application procedures
   b. type research, estimate of funds, and approval
   c. date of submission
   d. number of copies of the application
   e. applicant's name, present position, signature
   f. administering institution
   g. conference grants
   h. travel
   i. computer costs
   j. salaries and benefits
   k. overhead
   l. type participants
   m. major equipment
   n. approvals for research
   o. principal investigator's approval for expenses

2. Contracts:
   a. definition
   b. authority to make contract
   c. contract proposals
   d. approving authority must examine the proposal
   e. Office of Research Administration
      must approve formal contract
   f. withholding of payment
   g. use of staff members as consultants
h. use of university facilities
i. non-trivial use of facilities
j. costing considerations

3. Conduct of research:

a. specific guidelines are to be followed to protect participants used in a research project
b. grant-supported staff are to receive the same kind of employment terms as departmental staff

4. Output from research:

a. publications
b. patents
c. copyright

Requests for conducting research at the Montgomery Community College (1976) should be written and submitted to the Office of Institutional Research through the appropriate supervisor within each department. The following is a list of guidelines for the potential researcher:

1. He should provide the Dean of Institutional Research and Analysis with:

a. A proposal which contains the detailed plan for the research;

b. Copies of any research instruments to be used in the project;

c. The names of the instructors, students, and other persons to be involved in the study;

d. An estimate of the time required by each of the above groups;
e. An estimate of any costs to the institution; and

f. The approval of the appropriate account manager(s) whose funds are to be used to finance the research.

2. The "researcher should submit a copy of the completed study to the President via the Dean of Institutional Research and Analysis, prior to publication."

3. Any faculty member conducting independent research should provide the Dean of Institutional Research and Analysis with a proposal and then an abstract when the study is completed.

4. In addition, "copies of the completed studies will be placed on file in the library on each campus, and in the Office of Institutional Research Analysis."

The following guidelines are for those individuals who are conducting research related to the institution, but are not affiliated with Montgomery College:

1. All requests for enrollment information (other than those concerning individual students) should be forwarded to the Dean of Institutional Research and Analysis.

2. No official enrollment figures will be released prior to the end of the third week of classes and only after the President has received them.

3. Only requests from those regarded as legitimate researchers will be considered.

4. All requests for information about students or access to students' folders will be handled in accordance with policies established by the Board of Trustees.

5. A brief written proposal and copies of any instruments to be used, such as questionnaires, will be required....Also the written approval of the Dean of Institutional Research and Analysis is required to authorize the research.
6. A copy of the completed study will be kept on file in the Office of Institutional Research and Analysis, and a summary of the study will be forwarded to the President.

7. "Questionnaires sent to personnel within the college should be cleared through the Office of Institutional Research and Analysis before the reply is made."

Summary

Chapter 4 deals with the perceived needs that may relate to institutional research of the administrators and a small group of the faculty at Lake Michigan College, as well as review of material related to institutional research received from a selected group of institutions.

The present data base at Lake Michigan College meets approximately 8.7 percent of the administrators' perceived needs. The other needs will require the development of research studies.

The literature received from the selected group of institutions was divided into two areas: governance structures; policies, procedures, and guidelines. There were no patterns of governance structure for the Office of Institutional Research within the institutions except that it was assigned to a high administrative office.

Six of the responding institutions indicated they did not have any written policies and procedures that related to institutional research.

Policies, and procedures were used from five of the responding institutions. These seemed to reflect the
consensus of the other institutions and they are synthesized in Chapter 5.
CHAPTER V

A Model For Institutional Research

Introduction

There are colleges seeking ways to manage institutional data for more effective decision-making and more efficient reporting to external agencies. In order to respond to the demands for data, institutions are organizing research capabilities on their respective campuses.

An Office of Institutional Research is an extremely valuable and productive arm of an institution if it is organized, managed well, and its role in the institution clearly understood. The first aspect of the purpose of this investigation was to develop a proposed Institutional Research Model which would provide guidelines that might be adapted to the circumstances and needs of an institution of higher education, specifically Lake Michigan College.

An examination of Lippitt's definition of a model (Chapter 3) reveals there must be a symbolic representation (in this investigation it was primarily a verbal description) of various aspects of the situation and their relationships. Some of the aspects of institutional research are: (1) meaning of
in institutional research; (2) where does institutional research fit into the institution's organizational structure; (3) organizational structure of the office; (4) conceptual structure for institutional research; (5) objectives of the office; (6) policies and procedures; (7) characteristics of an advisory committee; and (8) internal and external requests.

The Meaning of Institutional Research

The literature contains many varied definitions of institutional research. Some of the authors indicate that it is primarily investigative, others feel that it provides primarily a reporting service, and there are those who believe it should be a combination of both. The following definition is a synthesis of several authors' ideas (Dressel, 1971, p. 23; Suslow, 1972, p. 17; Rourke and Brooks, 1966, p. 44; Saupe and Montgomery, 1970, p. 3):

Institutional Research is a form of organizational self-study consisting of data collection, analysis, and reporting which may facilitate operations and decision-making within institutions of higher education. One of its purposes is to probe deeply into the operations of the institution for evidence of weakness which may interfere with the attainment of its purposes, or which utilize an undue amount of resources in attaining its goals. It may be research which is needed to facilitate efficient operations, but it is also needful to promote qualitative improvements within the institution. This research involves applied and basic concepts.
Figure 1. Organizational Chart
Figure 1 presents a proposed organizational governance structure for the Office of Institutional Research. The director of institutional research is an adjunct to the president's office through an assistant to the president. This structure tends to add credibility to the office and offers broader availability to all departments of the institution; that is, the office needs access to information and cooperation of the different offices which generate that information. The director should maintain a staff relationship to the vice-presidents, deans, faculty, president's council, cabinet, and students.

Administrative Structure of an Office of Institutional Research

Organizationally, institutional research should consist of (Holmes, 1976, p. 5; Ludlow, 1977; Moore, 1965, pp. 5, 6; Brantley, 1977, p. 3): (1) director, (2) advisory committee, (3) associate director for administrative research, (4) associate director for academic research, (5) secretary, (6) research analysts, (7) programmer, and (8) student assistants. If one person can be selected who has administrative as well as curriculum and instruction background, then the office may use only one associate director. Some offices may have only a director and a secretary, but it is extremely difficult for one person to perform all the data gathering and analysis tasks inherent in institutional research.
Conceptual Structure for the Office of Institutional Research

The following is presented as a proposed conceptual structure for institutional research taken from Chapter 1. The Office of Institutional Research should:

1. Have a staff relationship, but be an adjunct to the president's office. This will tend to add credibility to the research office and offer broader availability to all agencies of the institution.

2. Have an advisory committee of faculty and administrators to evaluate suggestions for research, suggest possible areas of inquiry, set priorities for studies, and serve as a channel of communication between the research office and the faculty and administration.

3. Involve wide participation in research and planning by members of the faculty and administration.

4. Have responsibility for the data bank to protect the confidential nature of certain types of data.

5. Have freedom to initiate the development of the necessary data systems to ensure that the proper information is available for problems which the office personnel may anticipate: present and/or future.
6. Have an assurance, through a commitment by the administration and faculty, that institutional research findings will be used.

7. Be able to suggest new tools and techniques for solving problems.

8. Collect data for internal and external reports

9. Coordinate or conduct studies in new methods of teaching

10. Provide assistance in long-range planning

11. Make recommendations to help in policy formulation, but should not become involved in policy implementation.

12. Conduct studies which evaluate how effectively institutional goals are being achieved.

13. Conduct studies which evaluate the effectiveness of current programs and institutional operations.

14. Conduct studies which serve the faculty as well as the administration.

**Objectives or Functions of the Office of Institutional Research**

Institutional research is defined by Stickler (1961, p. 542) as research directed toward providing data useful or necessary in the making of intelligent administrative decisions, and in the successful operation, maintenance, and improvement of a given institution of higher education. It includes the collection and

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analysis of data used in appraising the institutional environment, in preparing the budget, in planning the educational program, and in evaluating student progress. Institutional research is needed to facilitate efficient operation, but it is also needed to promote qualitative improvements.

The definition of institutional research as outlined by Stickler provides a basis for developing objectives for the Office of Institutional Research. It describes general areas of needed research, but in an actual research office the concepts of the objectives of institutional research follow from identification of the needs of the institution. The proposed objectives of institutional research in this investigation were obtained from a review of literature on institutional research (see Chapter 2) and a review of material received from institutions engaged in institutional research (Brantley, 1977; Lelong, 1977; Louisiana State University, 1977; Oklahoma State University, 1977; The University of British Columbia, 1977).

The following are proposed objectives for an Office of Institutional Research:

1. Assist in the design and conduct of studies to evaluate educational programs.
2. Identify emerging problems so that information needs may be anticipated and met.
3. Gather, analyze, and interpret data relevant to the operation of the institution.
4. Assist with student and faculty research activities that may be concerned with institutional problems.

5. Carry out follow-up studies of alumni to evaluate the effectiveness of the academic program.

6. Provide planning and evaluation services which will enable the president and academic units to prepare for decisions which will have to be made in the future.

7. Provide selected information about the institution which is required by external agencies.

8. Serve in an advisory capacity to groups responsible for the development of a management information system. That is, if the Office of Institutional Research does not have full responsibility for developing a management information system.

9. Study the process of evaluation and planning in order to enhance such efforts within the institution.

10. Use analytical techniques with available management information to provide estimates of resource requirements necessary to meet alternative institutional goals.

11. Develop procedures for communicating and interpreting directions for, research and subsequent use of the results.
12. Serve in an advisory capacity in long-range planning as it relates to facilities and programs.

13. Function as the center for special information requests of the president and other officials of the institution.


15. Help define institutional goals and objectives.

16. Determine how effectively the institutional goals are being met.

17. Examine basic precepts involved in changing institutional goals or functions.

**Policies and Procedures for Institutional Research**

A letter was mailed to a selected group of institutions of higher education requesting information about policies and procedures they used in their Office of Institutional Research. The following proposed policies and procedures were compiled from information sent by these institutions: University of Alberta, Johnson County Community College, American River College, The University of Toronto, and Montgomery Community College.

1. Projects which are not for the instruction of students, but are academically oriented must be approved by the appropriate departmental chairman and dean before submission to the advisory committee.
The director of institutional research should be chairman of the advisory committee.

2. Projects conducted for the purpose of improving instructions in a course must receive approval from the appropriate departmental chairman before submission to the advisory committee.

3. Projects which are initiated by the administrators and which are not academically oriented should receive approval from the President through the director of institutional research.

4. Proposed projects must have the potential of benefiting the institution and making a contribution to education. They must be replicable, non-trivial, and not self-serving.

5. The project must be sound in terms of research design, sample selection, instruments, and statistical analysis. Personnel to be used, participants, research time-table, estimated costs, procedures and plans for distribution, and use of results should be clearly detailed. There must be reasonable assurance that the study can be completed within the projected time.

6. Copies of any research instruments should be submitted with the requests to conduct the research to the advisory committee.
7. The project must be conducted by, or supervised by, an individual with research qualifications; that is, a research staff member or an individual approved by the advisory committee.

8. A complete report of the results must be made available to the advisory committee before it is made public.

9. There should be policies developed to cover publication, patents, and/or copyrights of final reports.

10. Copies of the completed projects should be placed on file in the Office of Institutional Research.

After item five has been evaluated and priorities established, the director of institutional research should review the studies and priorities with the President. Feedback from the President is essential for the committee to function efficiently and effectively.

The projects referred to in the proposed policies and procedures relate to institutional research studies which may be conducted by administrators or faculty.

Characteristics of an Advisory Committee

The advisory committee as an essential organ of the Office of Institutional Research has been recommended in this investigation. Since the research office may become isolated from
other departments of the institution and may fail to recognize some significant areas of concern, the advisory committee can bring together a group of individuals who represent the faculty and administration and have a knowledge of and interest in research as well as a deep concern for the improvement of the institution.

Brantley (1977) has suggested that the advisory committee should possess the following characteristics:

1. Represent a significant segment of the institution;
2. Have input into the decision-making process at some level in the institution;
3. Be sensitive to the needs of the constituency;
4. Have a basic knowledge of research and the function and purpose of the institutional research office;
5. Be committed to the survival and full development of the institution;
6. Have a cordial and fully open relationship with the institutional research office.

Internal and External Requests

A review of the literature in institutional research indicated the following areas as possible internal requests for institutional research studies:

1. Current problems and issues of higher education
2. Institutional goal assessment
3. Students—ability, characteristics and background, costs, progress, transfer, drop-outs
4. Faculty—characteristics, load, salaries
5. Curriculum
6. Facilities
7. Administration
8. Finances
9. Public Relations
10. Class size
11. Operational costs and factors related to costs
12. Degrees awarded
13. Enrollment analysis and projections
14. Grading practices
15. Aims and objectives
16. Instruction
17. Factors that aid growth or retardation of the institution
18. The effect that size and administrative structure
   have on the speed of the decision-making process
19. Teaching the non-traditional student
20. Student values and emergent trends in college education
21. Relation of learning to future employer expectations
22. Changing role of student and faculty to traditional classroom activities
23. Classroom testing
24. Incoming student aptitudes
25. Entrance test performance
26. High school performance
27. Characteristics of graduates
28. Distribution of declared majors
29. Changes in employment
30. Migration patterns
31. Fiscal management and cost analysis
32. Long-range planning
33. Institutional accountability
34. Community needs assessment
35. Program evaluation
36. Data and information management.

Areas of research for Lake Michigan College would include the perceived needs given in table 1, appendix F, plus any new needs that may occur due to a reassessment of their program.

Each institution may receive a different set of external requests. Jones (1970, p. 61) indicated that he selected for his study alternate forms (every other questionnaire) as they were received at Syracuse University. His sample was 75 forms for each year studied; therefore, Syracuse University received approximately 150 questionnaires per year from external agencies.

Figure 2 depicts the organization of the model. It illustrates the fundamental structure upon which the research office is built. This chapter has been devoted to a discussion of the component parts that make up the fundamental structure.
Figure 2. A Recommended Model for Institutional Research
Reactions of the Panel of Experts

The panel of experts, as described in Chapter 3, was drawn from those directors of institutional research who had responded to the inquiry for information about institutional research policies. Four directors were from community colleges, two were from four-year colleges, and two were from universities (appendix E). Six of the directors mailed in their reactions to the model (appendix G).

An examination of the reactions revealed that the panel was in concordance with the basic concepts presented in the model. The narrative responses intended to support the proposed model are quoted in the following paragraphs.

I think you have developed a model which merits trying.

Your model can certainly serve as a useful reference model of practical procedures to follow.

I am sure this document will be useful in helping others determine information needs of their colleges and universities and in beginning an Office of Institutional Research.

It was evident to the reader that a great amount of time and care went into the preparation of this study. The review of the literature on the field is probably the most complete to be found anywhere. One only hopes that before too long a monograph will emerge from this study with a focus to include not only Lake Michigan College, but a wider institutional research community as well.

I consider this model to be an excellent proposal and worthy of serious consideration.

The model that you have developed will be of great value to a college which is in the initial stages of developing an institutional research office. I commend you on the
excellent job you have done reviewing the literature on Institutional Research. You have also apparently accomplished a very difficult task of having an institution define its needs for information.

Statements by the panel members reacting to specific suggestions within the model are presented in the following summary. There were three comments concerning the director of institutional research reporting to the Assistant to the President. Two of them gave caution about the relationship and the other indicated that it was "realistic and appropriate." One panel member commented about the difficulty of developing a generalized institutional research model. Another indicated there were many different variables that might have an influence on the on the model. Three of the members commented on the advisability of suggesting the use of an advisory committee in institutional research. The comments dealt with the need for such a committee, the committee's ability to establish appropriate priorities, and an alternative to an advisory committee. The letters from the panel members are in appendix G if anyone is interested in a more detailed response.

**Implementation of the Model**

A director of institutional research, data analyst, programmer, and secretary should be selected. The office may initially start with a small staff, but it should increase the number of employees as the work load increases.
It is recommended that an advisory committee of faculty and administrators be selected. These individuals should have a basic knowledge of research and they should be committed to the development of the institution. The committee should include at least two faculty members selected by each division, the director of institutional research, the vice-president of instruction and other representatives of the administrative staff to be selected by the president's cabinet. This is to provide wide institutional representation and a check and balance system for research.

The Office of Institutional Research (director and staff) should be free to suggest studies for investigation, suggest new tools and techniques for solving problems, make recommendations to help in policy formulation for the institution, evaluate how effectively institutional goals are being achieved, and perform daily operations of the office.

What studies should the director of institutional research initiate? Since there are many perceived needs which makes it impossible for the director to investigate them all at one time, what criteria should he use in selecting his initial studies?

The goals established for Lake Michigan College (Klimes, Bissell, and Marshalleck, 1976, p. 144) were used as a starting point. The institutional goals are as follows:

1. To prepare students for further education and to stimulate in them a continuing interest in obtaining knowledge.

2. To develop in students mastery of basic skills of reading, computing, and communication.
3. To develop in students the necessary knowledge, skills, and attitudes to perform successfully in their careers.

4. To serve the educational needs of the adult community.

5. To provide guidance and other services for students in choosing careers, in selecting curricula, and in finding employment (p. 144).

6. To assess the efficient use of the human, financial, and physical resources of the college.

The following are studies which relate to the institutional goals and which the director may recommend to the advisory committee for evaluation and the establishment of priorities:

Goal 1: After leaving Lake Michigan College, did the student continue his studies in a vocational program, or did he continue in an academic program? What percent of the LPNs entered an associate degree program? What percent of the students entered a baccalaureate program?

Goal 2: How many students drop out before mid-semester? In what areas are they dropping out? How do you change the curriculum to meet the needs of those who have dropped out if the reason is curriculum oriented? What affect does personal contact have on students in terms of retention in the program? How many of the original group who entered the program completed the program? Determine whether the needs of the more capable students are being met.

Goal 3: How well do the students perform on the job? Determine if programs are meeting current needs in the job market. Did the student leave school before he had earned saleable skills, or did he complete the program? What is the competency level for each student who does not complete his program of study?

Goal 4: Determine how many adults (older than 24 years of age) are eligible to attend Lake Michigan
College? What is the ethnic and racial make-up of the adult community who are eligible to attend Lake Michigan College? How many senior citizens want to attend Lake Michigan College? What impact does their attendance have on the educational program? What impact does their attendance have on the total enrollment? What are the community's educational needs: academic, professional, paraprofessional, leisure time? Are there any groups within the community which have educational needs, but are being overlooked? What courses are needed by working men and women to meet the practical needs of their job, to improve their skills which will enable them to perform better on the job? Which organizations need to rent facilities or need courses taught which will meet their particular requirements?

Goal 5: Develop a profile for those students who enter Lake Michigan College and graduate. Study the financial aid needs of the students. Analyze records of students to make certain they are easily evaluated by other institutions. Determine whether some classes are being dropped more than others.

Goal 6: Is each area of the college receiving its allocation of funds? What programs are using what space? Is some space being over-utilized while other space may be under-utilized? Utilization of laboratory equipment; for example, microscopes. Utilization of laboratory space; that is, number of stations related to class size. What resources have been used in other programs which could have been used more effectively in some particular program in which it was not used and funds were not available? How do students and faculty react to the library's learning resources? When teachers attempt to check out audio-visual equipment, how many times is it available? How many times does it fail to operate? How much equipment is used, and how often? How many books meet college needs?

If we consider a system's model as a guide for handling the research studies, then we have the following: (1) input, (2)
process, and (3) output. The perceived needs that relate to each goal may be considered as desired reports which are outputs of the research process. The next step is to define the necessary parts of the report. That is, what inputs are needed to answer the questions contained in the report? This enables the researcher to determine the data bank that is essential for completing the report. It also allows the researcher to determine the research process: who will be involved, cost, need, ease of implementation. Priorities will be based on need, cost, ease of implementation, and availability of personnel.

It is not recommended that all the studies based on the institutional goals be developed at one time, but the outreach may be increased as more experience is gained in the research process. Even though these recommendations are based on the institutional goals of Lake Michigan College, other institutions may use their own goals and their perceived needs that relate to institutional research.
CHAPTER VI

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was: (1) to develop a proposed Institutional Research model for Lake Michigan College; and (2) to determine the informational needs of Lake Michigan College. The procedures followed to accomplish an adequate treatment of the problem were: (1) to review literature on organization of institutional research, objectives of institutional research, and areas of institutional research studies; (2) to review literature that contained concepts which could be used in proposing a theory for institutional research; (3) to interview the administrators at Lake Michigan College to obtain perceived needs that might relate to institutional research, and to administer a questionnaire to the faculty concerning institutional research; (4) to review material received from a selected group of institutions that were involved in institutional research; and (5) to develop an Institutional Research model.

Some of the major points found in the review of literature are summarized as follows:
1. A centralized concept for the Office of Institutional Research allowed the research office to assume a coordinating staff role since it was the focal point for institution-wide data collection.

2. The Office of Institutional Research may make recommendations, submit alternatives, and point out their consequences, but it should not become involved in policy implementation.

3. The Office of Institutional Research should be an adjunct to the president's office.

4. The Office of Institutional Research should attempt to probe into the workings of the institution for evidence of weaknesses that may interfere with the attainment of its goals and objectives.

5. The Office of Institutional Research should develop a set of objectives which would include research to aid and involve faculty and administrators.

There were conceptual statements taken from the literature and used to propose a theory for institutional research. A definition of institutional research was compiled from the different definitions that appeared in the literature. Some authors suggested a part-time director and secretary for a small institution, to a large full-time staff for a large institution. Some of the authors recommended an advisory committee made up of faculty and administrators to help the researcher and to be a
liaison between the research office and the other departments of the institution.

An unstructured interview was conducted with each of the deans, vice-presidents, and the president at Lake Michigan College to obtain a list of needs that might relate to institutional research. The interviews were conducted with the use of a cassette recorder, and later transcribed and reviewed by each administrator. A questionnaire was submitted to the faculty; the number of responses was very low and therefore no statistical inferences were made.

A letter was mailed to a selected group of institutions requesting information about their policies and procedures in the area of institutional research. Those institutions which responded were helpful because they included additional literature about institutional research at their institutions. One of the areas reviewed was the governance structure for the Office of Institutional Research. A response from the selected group of institutions for one area indicated that there was no pattern; some of the offices reported to the president, vice-president for academic affairs, executive vice-president, and other administrative officials. Some of the institutional research offices included copies of the policies and procedures used by their offices in handling requests for research studies or questionnaires from external agencies. A proposed set of policies and procedures was compiled from this material.
The model was developed from a review of literature on institutional research, and information received from practicing directors of institutional research. The model was structured around (1) the conceptual structure for institutional research; (2) the meaning of institutional research; (3) objectives for the Office of Institutional Research; (4) policies and procedures to guide the office when they receive requests for studies and information; (5) the advisability of an advisory committee; (6) the type of requests for information that the Office of Institutional Research might receive; and (7) the institution's governance structure as well as that of the Office of Institutional Research.

Conclusions

The major conclusions are drawn from information and experience gained in this investigation. A review of the literature highlighted the fact that practitioners and administrators had different ideas concerning the aims of institutional research. Blai commented in his letter (appendix G) that this was the "fundamental dilemma in seeking to develop a generalized institutional research model." It may be difficult to write specific details that may apply to each institution, but the investigator believes that the proposed model will apply to different institutions. The categories classified as the "fundamental structure for institutional research" is basic for all institutions. Each institution needs a conceptual structure,
definition of institutional research, objectives, policies and procedures to guide the office, an advisory committee, and a governance structure. The investigator did not intend that the proposed definition, or objectives, or policies and procedures be considered as the "law of the Medes and Persians," but were to be used as guidelines for those institutions where it was necessary to modify them.

It was suggested in this study that the Office of Institutional Research be attached to the office of the Assistant to the President. The investigator acknowledges that this particular governance structure may not be workable at another institution. Some writers have suggested that the Office of Institutional Research should be attached to the President's office. This does not change the need for a governance structure which is applicable for the research office and one which is applicable for the institution.

The Office of Institutional Research is supposed to be engaged in research to benefit the total institution. Therefore, its governance structure should include staff members who have experience in curricula evaluations and other academic evaluations as well as staff members who have experience with administrative operations.

For the research office to have access to information from the total institution, it should be attached to the President's office.
Several panel members commented on the advisory committee. Gell stated, "any comprehensive program developed by an advisory committee can, and will, be superseded by the urgent need of the President for research data; thus delaying any planned research project" (appendix G). Similar statements could be selected from the literature about institutional research. Authors also caution the researcher not to become involved in external reports and daily operations of the institution to the exclusion of other studies that need to be conducted. The investigator believes that using an advisory committee will encourage the faculty and staff to become involved in the research process so that no one group is ignored. The director of institutional research should be a coordinator and consultant rather than being bogged down with a small phase of institutional research. The advisory committee adds the dimension of check and balance to the program. If the advisory committee is eliminated, then there is the possibility of the research office becoming the Office of Administrative Research rather than the Office of Institutional Research. If administrative research becomes more important, then the office needs to change its name.

**Recommendations**

Rice in an article entitled "Does IR Influence Decision Making?", published in the Winter 1978 issue of *Newsletter* of Association for Institutional Research, indicates that institutional research does not exist in many smaller colleges, the research budget in all colleges is very small, many directors seem
to have other functions, and "new AIR membership over the last few years has been primarily from universities, state educational boards, and federal agencies rather than smaller four-year and two-year colleges" (p. 4). The investigator, along with Rice, feels that institutional research does not enjoy institutional commitment from all colleges and universities. It is recommended that colleges and universities utilize the potential of institutional research in the decision-making process.

It is recommended that Lake Michigan College make a full commitment to the use of institutional research and incorporate it into the college's decision-making process. Elai indicates that institutional research findings should be used. "I firmly believe that it is an exercise in futility to file and forget the results of sound institutional research" (appendix G).

It is recommended that Lake Michigan College establish a budget for institutional research.

It is recommended that after institutional research has been implemented, a study be conducted to determine the extent to which the perceived informational needs are, or are not, being met through meaningful institutional research.

It is recommended that further study be initiated concerning additional variables that may influence an institutional research model and in particular, the institutional research process.
It is recommended that a study be made of the relationship of the Office of Institutional Research with the center for data processing in community colleges.
APPENDICES
Lake Michigan College Administrators Interviewed


5. Arthur Crump, Associate Dean of Students. Date interviewed: April 26, 1977.


Cover Letter for Transcribed Interview of Perceived Needs that Lake Michigan College Administrators Felt Related to Institutional Research

Administrators
Lake Michigan College
Benton Harbor, MI 49022

Dear Sir or Madam:

These are the perceived needs of your division that may relate to Institutional Research. Please re-word, add, or delete any item on this list, then rank each, using 1 as the most important in ascending order.

Please return your list as soon as possible to Mr. Kenneth Riley Room C-202D.

Thank you.

Very truly yours,

Jonas M. Dalton
Doctoral Candidate
Andrews University
Cover Letter for "Faculty Inventory for Proposed Institutional Research at Lake Michigan College"

Dear Faculty:

I am a doctoral student at Andrews University, soliciting information to aid in the development of an Office of Institutional Research at Lake Michigan College.

This letter is being written to ask for your insights and opinions on a "Faculty Inventory for Proposed Institutional Research at Lake Michigan College," which is enclosed.

The introduction on the questionnaire will give you some background on this proposed service at Lake Michigan College.

May I count on you to take the 10-15 minutes necessary to complete this Inventory within the next few days so I may have the benefit of your perspectives? It can be returned to Mr. Kenneth Riley, Community Service Coordinator, Room C-102D.

Many thanks for your help.

Very truly yours,

Jonas M. Dalton
Faculty Inventory for Proposed Institutional Research at Lake Michigan College

Introduction:

In an effort to propose an effective new program of institutional research at Lake Michigan College, it is helpful for us to survey a wide range of sources to discover areas of need and potential need for institutional research at Lake Michigan College.

INSTITUTIONAL RESEARCH is a form of organizational self-study designed to help colleges and universities gather data, and analyze and present the results for the purpose of: (1) aiding in the administration of the institution; (2) organizing itself most effectively to achieve long-range goals, (3) ascertaining the effectiveness of institutional programs, and (4) identifying new programs and operational changes needed to achieve institutional purposes.

Instructions:

Please read and answer each question carefully and thoughtfully.

Part III is the main body of this inventory. Please be prepared to give it your greatest amount of time and thought. Do not sign your name to the inventory. No individual return will be identified in any way with an individual person in the report of this study. All personal information here is strictly to enable the writer to make meaningful tabulations and shall not be used for any other purpose.

Please complete and return this questionnaire within one week of receiving it.

Thank you for your valuable assistance!
Part I - PERSONAL INFORMATION
(Please place an X by the appropriate answer.)

1. My primary relationship to Lake Michigan College is:
   a. ____ Faculty (Full-Time)
   b. ____ Faculty (Part-Time)

2. Number of years completed at Lake Michigan College
   a. ____ Less than 1 Year
   b. ____ 1 Year
   c. ____ 2 Years
   d. ____ 3 Years
   e. ____ 4 Years
   f. ____ 5 Years
   g. ____ 6-10 Years
   h. ____ 11-20 Years
   i. ____ Over 20 Years

3. My major academic area is
   a. ____ Business and Secretarial Science
   b. ____ Continuing Education and Community Services
   c. ____ English Language and Literature
   d. ____ Health Science
   e. ____ Mass Communication and Fine Arts
   f. ____ Mathematics and Science
   g. ____ Social Sciences
   h. ____ Technologies and Vocational

4. My academic rank is:
   a. ____ Professor
   b. ____ Associate Professor
   c. ____ Assistant Professor
   d. ____ Instructor
   e. ____ Lecturer, Part-Time
Part II - PRESENT OPINIONS

5. I feel that my present understanding of the role and function of institutional research is:
   a. ___ Complete
   b. ___ Sufficient
   c. ___ Meager
   d. ___ Non-existent

6. Indicate which one of the following means has been the source of your present understanding of institutional research:
   a. ___ Readings on the subject
   b. ___ Conversations and discussions
   c. ___ The introductory note to this inventory

7. Based upon my present understanding of the role and function of institutional research, these are some of the hopes and expectations which I hold for its contribution to Lake Michigan College:

   __________________________________________________________
   __________________________________________________________

8. Based upon my present understanding of the role and functions of institutional research, these are some of the reservations and cautions I have concerning its functions:

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

9. What degree of cooperation and moral support do you feel you could give to the institutional research function at Lake Michigan College?
   a. ___ Maximum
   b. ___ Considerable
   c. ___ Minimal
   d. ___ None

10. What degree of resistance do you feel can be expected for the institutional research function at Lake Michigan College?
    a. ___ Maximum
    b. ___ Considerable
c. ____ Minimal

d. ____ None

11. At present, the Institutional Research Office is to be subsidized largely by a government grant. Do you feel that the potential value of institutional research for Lake Michigan College is sufficient to justify its support by College funds?

a. ____ Yes
b. ____ No
c. ____ Not enough perception of its function or potential to answer.
Part III - SUGGESTED AREAS FOR INSTITUTIONAL RESEARCH

Institutional research is as broad as the operation of the College. It therefore can be quite general and/or quite specific.

In this part of the inventory, please give your suggestions for areas of institutional research which may be general or specific, college-wide or for a smaller segment.

Following is a listing which classifies institutional research into ten general categories. In each of these categories, there are given some examples of typical concern for which studies often are made in institutional research.

Please list in the spaces provided under the various categories your suggestions for studies which you feel would be valuable to conduct at Lake Michigan College. You may select from the samples themselves, if they are appropriate, but hopefully your list will represent your personal thought and selection. Be as specific as you can, and care to be. This is the heart of the questionnaire; please give it your best thought.

1. GOALS AND OBJECTIVES -- Institutional philosophy, standards, and objectives; institutional character and climate; long-range planning:

2. STUDENTS -- Analysis of student characteristics, opinion, attitudes; drop-outs; employment; source of funds; financial aid; scholarships; costs of college attendance; activities (social, athletic, academic, etc.); academic achievement; utilization of personnel services (counseling, health, testing, etc.); study of graduates (success, vocations, opinions, etc.):

3. FACULTY -- Characteristics; work load; length of services; professional activities; promotions; salaries; retirements; sabbatical leaves; student credit hour ratios; satisfactions-dissatisfactions; academic and personal freedom; turnover; self-evaluation:
4. **ADMINISTRATION** -- Characteristics; length of service; functions; decision-making procedures; channels of communication; relationship to faculty.

5. **CURRICULUM AND LIBRARY** -- Courses listed, offered, repeated; summer session; remedial programs; honors program; library holdings; circulation, acquisitions; student use:

6. **INSTRUCTION/TEACHING METHODS** -- Teaching effectiveness; course evaluation; class size; examinations; grading; programme instruction; student credit hour ratios; innovations and their evaluation.

7. **SPACE/FACILITIES** -- Space utilization studies (classroom, laboratory, office, administrative, service); student instructional space ratios; future needs and development:

8. **BUDGET/FINANCE** -- Unit costs; budget projections; source of funds; expenditure of funds; evaluation of tuition, fees, and student charges:

9. **ADMISSIONS/ENROLLMENT** -- Admission policies; test scores; characteristics of applicants and enrollees; course enrollments; enrollment projections; course screening and placement; probation:
10. **PUBLIC RELATIONS** -- community relationships; special events (cultural, athletic, etc.); use of facilities by outside groups; college service functions to outside groups; publications; mass media:

11. **OTHER** -- (Indicate any other studies which you feel ought to be conducted regardless of where it might be classified above).:
Part IV - INVENTORY OF CURRENT DATA

1. **Reports and Summaries**

   List the reports and summaries which your department has made in the recent past according to the following categories:

   a. One-time compilations—

      __________________________________________________________
      __________________________________________________________

   b. Occasional compilations—

      __________________________________________________________
      __________________________________________________________

   c. Regular compilations—

      __________________________________________________________
      __________________________________________________________

2. **Other Unsummarized Data**

   List any other data which you regularly collect which are not summarized or reported by means just noted in A, above:

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

   (use additional sheets if necessary)

THANK YOU.
Institutions of Higher Education to Whom Requests for Information Relating to Institutional Research Were Sent.

1. Harcum Junior College, Bryn Mawr, Pennsylvania
3. Moraine Valley Community College, Palos Hills, Illinois
4. Brigham Young University, Provo, Utah
5. University of Wisconsin, Madison, Wisconsin
6. Indiana University, Bloomington, Indiana
8. University of Tennessee, Martin, Tennessee
9. University of California, Berkeley, California
10. University of Georgia, Athens, Georgia
11. University of Southern California, Los Angeles, California
12. Northern Michigan University, Marquette, Michigan
13. Stephens College, Columbia, Missouri
14. Oakwood College, Huntsville, Alabama
15. Mercer County Community College, Trenton, New Jersey
16. New York City Community College, Brooklyn, New York
17. De Anza College, Cupertino, California
18. Florida State University, Tallahassee, Florida
19. University of North Carolina, Chapel Hill, North Carolina
20. Washington State University, Pullman, Washington
21. Wayne State University, Detroit, Michigan
22. Duke University, Durham, North Carolina
23. University of Minnesota, Minneapolis, Minnesota
24. Manatee Junior College, Bradenton, Florida
25. The State University of New York, Buffalo, New York
26. Virginia Polytechnic Institute and State University, Blacksburg, Virginia
27. Shasta College, Redding, California
28. Louisiana State University, Baton Rouge, Louisiana
29. The University of Calgary, Calgary, Canada
30. University of Massachusetts, Amherst, Massachusetts
31. The University of British Columbia, Vancouver, Canada
32. New River Community College, Dublin, Virginia
33. North Carolina Agricultural and Technical State University, Greensboro, North Carolina
34. McGill University, Montreal, Canada
35. American River College, Sacramento, California
36. Flint Community Junior College, Flint, Michigan
37. Montgomery Community College, Rockville, Maryland
38. Governors State University, Park Forest South, Illinois
39. University of Michigan, Ann Arbor, Michigan
40. Johnson County Community College, Overland Park, Kansas
41. Oklahoma State University, Stillwater, Oklahoma
42. Georgia State University, Atlanta, Georgia
43. Pennsvlvnia State University, University Park, Pennsylvania
44. University of Alabama, University, Alabama
45. University of Missouri, St. Louis, Missouri
46. The University of Alberta, Edmonton, Canada
47. University of Toronto, Toronto, Canada
48. Kalamazoo College, Kalamazoo, Michigan
49. Marshall University, Huntington, West Virginia
50. Florida Technological University, Orlando, Florida
51. Texas Agricultural and Mechanical University, College Station, Texas
Copy of Letter Used to Request Information from the Institutions Listed Above.

Gentlemen:

I am a doctoral student at Andrews University, collecting material to aid in the development of a Proposed Policy and Department of Institutional Research at Lake Michigan Community College.

As necessary background for this project, I would like to study the research policies of other institutions that have demonstrated a commitment to, and an interest in, institutional research. It has been observed that your institution is currently engaged in institutional research.

I would appreciate a copy of any policy that you may have relating to institutional research, and I would also appreciate any further information on your institutional research activities that you may have available, especially relating to the commitment of institutional resources and the sponsorship of faculty research.

Very truly yours,

Jonas M. Dalton
Panel of Directors of Institutional Research Selected to Critique the Proposed Institutional Research Model.

1. Dr. James W. Firnberg; The Louisiana State University
2. Dr. Boris Blai; Harcum Junior College
3. Dr. Bernard Sheehan; The University of Calgary
4. Dr. Elaine L. Tatham; Johnson County Community College
5. Dr. Edith H. Carter; New River Community College
6. Dr. Paul Brantley; Oakwood College
7. Dr. Robert L. Gell; Montgomery Community College
8. Sister Ann Carmel Luciano; College of St. Rose.
### TABLE 1

**SUGGESTIONS BY LAKE MICHIGAN COLLEGE ADMINISTRATORS**  
**FOR INSTITUTIONAL RESEARCH STUDIES**

**Suggested Topics and Questions for Study**

**PRESIDENT**

1. What is the distribution of students' ages at Lake Michigan College?

2. How much is spent outside the classroom for support of instructional programs?

3. Need Data Bank for:
   a. State Reports
   b. Federal Reports
   c. Local Reports
   d. Board of Trustees
   e. Cabinet
   f. Administrative Council

4. Is each area of the college receiving its allocation of funds?

5. Follow-up studies to determine whether students are being trained for job entry and what happens to them five years into the future.

6. What value is attached to attendance at Lake Michigan College versus a state-supported, four-year institution.
TABLE 1—Continued

**Suggested Topics and Questions for Study**

by the students?

7. Is the value relative or absolute?

8. Protective devices that need to be established through research for the institution:
   a. What pay do the minority members of the staff receive?
   b. How long have they worked at Lake Michigan College?
   c. How can the institution justify its programs?
   d. Present an analysis of before and after affirmative action procedures.

9. Grade analysis by individuals, and by program division.

10. Teacher evaluation.

11. Compare the grade analysis with the teacher evaluation.

12. Personnel information:
   a. What degrees are held by the faculty?
   b. What is their area of concentration?
   c. How is above related to specific teaching assignments?

13. Space availability information to be used with HEGIS and other information.
   a. What programs are using what space?
   b. Is some space being over-utilized while other space
TABLE 1—Continued

Suggested Topics and Questions for Study

may be under-utilized?

c. When will the facilities be available, or which facilities will be available for community use?


15. Student records:

a. How many students took courses offered and what were the results? What was the number of drop-outs per week, at end of mid-term, and at the end of the semester?

b. What is the trend towards Vocational-Technical as opposed to the Arts and Science area?

c. What related subject programs do the Vocational-Occupational students take?

16. Utilization of laboratory space; that is, number of stations related to class size.

17. Utilization of laboratory equipment; for example, microscopes.

18. Budget:

a. How do you use past information about a division's expenses to project an increase or decrease in next year's budget?

b. What is the factual base needed to judge whether a
TABLE 1--Continued

Suggested Topics and Questions for Study

division's requested budget is a good budget?
c. On what basis does a dean allocate money to
different projects in his division when the data is
missing?
d. What should that data base be?
e. What are the consequences if a particular
alternative decision is selected?

19. Institutional research versus management information
system:
a. What interface is needed between institutional
research and the management information system?
b. What data base is needed?
c. What type data analysis is needed?

20. Community Services:
a. What is the ethnic and racial make-up of Berrien
County?
b. What is the ethnic and racial make-up of Benton
Harbor schools?
c. What is the age and sex breakdown of students
eligible to attend Lake Michigan College by grade
level, and other factors related to civil rights acts?
TABLE 1—Continued

**Suggested Topics and Questions for Study**

d. How many senior citizens want to attend Lake Michigan College?

e. What impact does their attendance have on the educational program?

f. What impact does their attendance have on the total enrollment?

g. How many members of the different ethnic groups are eligible to attend Lake Michigan College?

h. How many are adults?

i. What is the socio-economic level of families who want to send students to Lake Michigan College, and what is the socio-economic level of those students who finally attend?

21. Health Services:

a. What does it cost to provide health service for students at Lake Michigan College?

b. What factors should be used in determining the cost of a new dental laboratory at Lake Michigan College?

c. What factors should be used to determine the fee structure for students using the dental laboratory, other facilities, equipment, and service?

22. What factors should be included in the cost of an
TABLE 1—Continued

**Suggested Topics and Questions for Study**

23. What resources have been used in other programs which could have been used more effectively in some particular program in which it was not used and funds are not available?

24. How much data base should be available to determine if the resources are being allocated properly?

25. Career planning:

   a. How well are we doing in career planning based on the initial data base of the students when they entered Lake Michigan College, and what changes (student-initiated or college-initiated) have been made in the students' programs during their stay at Lake Michigan College?

   b. How many students drop out before mid-semester?

   c. In what areas are they dropping out?

   d. How do you change the curriculum to meet the needs of those who are out if the reason is curriculum-oriented?

   e. What affect does personal contact have on students in terms of retention in the program?

   f. How many may later re-enroll in the program?
TABLE 1--Continued

**Suggested Topics and Questions for Study**

**g.** How many of the original group who entered the program completed the program?

**h.** How many students complete the program in the allotted time?

26. What effect does the calendar have on enrollment: quarter system, semester system, trimester system?

27. How many examinations are based on the course syllabus?

28. How many classes does a student attend, and how many does he skip?

29. Which classes have heavy attendance and which classes have poor attendance?

30. In those classes which are heavily attended, what does the teacher do that the other teachers may not be doing or attempting to do?

31. After several semesters, what is the attitude of the students toward each group of teachers?

32. How do you effectively evaluate the teachers?

33. What criteria should be used in this evaluation?

34. What criteria should be used to rank teachers?

35. Who should make that type decision?

36. Is the evaluation process helpful for improvement and/or retention regardless of the technique?
TABLE 1--Continued

Suggested Topics and Questions for Study

37. Does the technique(s) make a difference in the evaluation process?

38. If there is a data base which helps the decision-maker, how does one use it creatively to release the creative potential of the staff and faculty?

39. How does one use a data base and the research process to give additional information which will enhance the decision-making process in creatively releasing the potential powers within each individual so that the organization functions smoothly?

40. Instruction:
   a. Faculty work load.
   b. Cost benefit—full- and part-time teachers.
   c. Faculty morale.

41. Total instructional program:
   a. How do the classified staff and secretaries feel about the institution?
   b. What is their morale?

42. Student personnel services:
   a. How do students and faculty react to the library's learning resources?
   b. When teachers attempt to check out audio-visual
### Suggested Topics and Questions for Study

**equipment, how many times is it available?**

- **c.** How many times does it fail to operate?
- **d.** How often does the equipment break down?
- **e.** How much equipment is used, and how often?
- **f.** How do the library resources compare with other community college libraries in size and usefulness?
- **g.** What is the relationship between the number of volumes of books at Lake Michigan College and the ideal library?
- **h.** How many books meet college needs?

#### 43. Student personnel:

- **a.** How well do the students perform on the job?
- **b.** How well do students function in other colleges and universities?
- **c.** Why do students leave Lake Michigan College?

#### 44. Word Processing Center:

- **a.** How many people use the facilities?
- **b.** How many of those who use the facility are satisfied with the services provided?
- **c.** How many people have experienced difficulties with the facilities and what were the different types of difficulties?
TABLE 1--Continued

Suggested Topics and Questions for Study

d. How many people attempt to use or do use the service on the weekend?

e. What days of the week is the service needed most?

f. Are secretaries being used for clerical jobs or are they being used in potential executive responsibilities more now than before the facilities were installed?

g. Is the Center being used to its full capacity?

h. Do secretaries type their boss’s letters rather than send them to the Word Processing Center?

EXECUTIVE VICE-PRESIDENT

1. Personnel studies:
   a. Statistical information concerning staff.
   b. Affirmative action program.
   c. Evaluation of personnel.
   d. Employee orientation.

2. Public relations and college relations:
   a. Image of Lake Michigan College and new Fine Arts Center.
   b. Community service courses.
   c. Preparation of students to enter a four-year program.

3. Personnel:
TABLE 1--Continued

Suggested Topics and Questions for Study

- Retention and disposal of records.

**STUDENT SERVICES**

1. Develop a profile for those students who enter Lake Michigan College and graduate.
2. Study the financial aid needs of the students.
3. Determine what database is needed for HEGIS report?
4. Determine what database is needed to complete internal an external reports?
5. Analyze records of students to make certain they are easily evaluated by other institutions.
6. In "open admission", determine whether the student has proper credentials to enter and complete the program.
7. Study drop-outs.
8. Determine whether some classes are being dropped more than others.
9. Determine whether the needs of the more capable students are being met.
10. Check to see if programs are meeting current needs in the job market.

**ARTS AND SCIENCE**

1. Curriculum evaluation.
2. Determine how many students are needed in the classroom
TABLE 1--Continued

**Suggested Topics and Questions for Study**

for the institution to break even on costs.

3. Determine if there is a simple technique for costing out a program.

4. Determine credits generated by each department within the Arts and Science Division.

5. Analyze instructional grading practices.

6. Generate studies on grade distributions.

7. Generate studies on faculty loads.

8. Find out what other Arts and Science Divisions are doing in institutional research.

**CONTINUING EDUCATION AND COMMUNITY SERVICES**

1. What are the community’s educational needs: academic, professional, paraprofessional, leisure time?

2. Are there any groups within the community which have educational needs, but are being overlooked?

3. What courses are needed by working men and women to meet the practical needs of their job, to improve their skills which will enable them to perform better on the job?

4. Who within the community has the training and experience to teach part-time?

5. What is the student feedback concerning type of courses,
Suggested Topics and Questions for Study

1. Instruction, and textbooks?

6. What are the community reactions to courses offered?

7. What are the demographics of the community?

8. Which organizations need to rent facilities or need courses taught which will meet their particular requirements?

OCCUPATIONAL STUDIES

1. Need Data Bank for:
   a. State reports for Lake Michigan College Occupational Studies reimbursement.
   b. Cost center and course number classification which indicates the courses which are eligible for reimbursement.
   c. Credit hours and contact hours on every course within the division.
   d. Special and support courses for vocational students.

2. How far did each student progress in his training? Did he leave school before he had earned saleable skills, or did he complete the program?

3. After leaving Lake Michigan College, did he continue his studies in a vocational program, or did he continue in an academic program?
**TABLE 1--Continued**

**Suggested Topics and Questions for Study**

4. There is need for a follow-up study on alumni, and it should include information that is on the "inquiry list" which is developed by the government of the State of Michigan.

5. Develop a profile on ethnic groups.

6. Determine the majors of each student.

7. What is the level of competency for each student who does not complete his program of study?

**HEALTH SCIENCE**

1. Employer evaluation of Lake Michigan College graduates in nursing.

2. Profile study on successful and unsuccessful students in the Health Science program.

3. Correlation of profile with college entrance requirements.

4. What percent of the LPNs enter an associate degree program?

5. What percent of the students are entering a baccalaureate program?

**LIBRARY**

1. What is the faculty's reaction to the library services?

2. What is the students' reaction to these services?
TABLE 1—Continued

Suggested Topics and Questions for Study

3. What books are needed to support each curriculum?

4. Are faculty members aware of what reference materials are needed when new programs are implemented?

5. At the time new programs are proposed and implemented, what reference materials are needed for students to have adequate materials available to meet the competency requirements of the course?

6. What impact do these needs have on the budget?

7. Are faculty members aware of material costs when requiring reference materials for new courses or existing courses?

8. What type of materials should be available at Lake Michigan College versus those which may be obtained through inter-library loan?

9. How many volumes of books are lost per year?

10. What is the cost of this loss?

11. What are the library needs of the general public?

12. What are the library needs of the local high school students who use the library?

13. Are losses higher with an "open door admission" policy?

14. How much subsidy does the library pay to provide students with Xerox reproduction facilities?
TABLE 2

SUGGESTIONS BY LAKE MICHIGAN COLLEGE FACULTY
FOR INSTITUTIONAL RESEARCH STUDIES

<table>
<thead>
<tr>
<th>Suggested Topics and Questions for Study</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GOALS AND OBJECTIVES:</strong></td>
<td></td>
</tr>
<tr>
<td>1. Institutional philosophy.</td>
<td>1</td>
</tr>
<tr>
<td>2. Institutional standards.</td>
<td>4</td>
</tr>
<tr>
<td>3. Institutional objectives.</td>
<td>3</td>
</tr>
<tr>
<td>4. Institutional character and climate.</td>
<td>2</td>
</tr>
<tr>
<td>5. Institutional long-range planning.</td>
<td>3</td>
</tr>
<tr>
<td>6. Develop course objectives that meet the needs of transfer and non-transfer students.</td>
<td>1</td>
</tr>
<tr>
<td>7. Determine how well the college is meeting its long-range goals and objectives.</td>
<td>1</td>
</tr>
<tr>
<td>8. Determine how the staff can become involved in long-range planning.</td>
<td>1</td>
</tr>
<tr>
<td>9. Determine whether the goals and objectives reflect the needs of the students and community.</td>
<td>1</td>
</tr>
<tr>
<td>10. Determine the type of remedial work that may be needed for students with poor educational background.</td>
<td>1</td>
</tr>
<tr>
<td>11. Determine the needs of the institution's clientele.</td>
<td>1</td>
</tr>
<tr>
<td>12. Define areas within Michigan that are primarily served by the College.</td>
<td>1</td>
</tr>
<tr>
<td>13. Develop grading standards and objectives for each department.</td>
<td>1</td>
</tr>
</tbody>
</table>
TABLE 2--Continued

<table>
<thead>
<tr>
<th>Suggested Topics and Questions for Study</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. Critical assessment of community support and criticism.</td>
<td>1</td>
</tr>
<tr>
<td>15. Determine the value of an advisory board which may have specific inputs on what the community really wants.</td>
<td>1</td>
</tr>
<tr>
<td>16. Determine institutional goals and priorities.</td>
<td>1</td>
</tr>
<tr>
<td>17. Non-response for this area or non-research oriented statements.</td>
<td>1</td>
</tr>
</tbody>
</table>

**STUDENTS:**

1. Analysis of student characteristics. 5
2. Student opinions. 2
3. Student attitudes. 4
4. Student drop-outs. 4
5. Transfer students. 3
6. Geographic origin of students. 3
7. Student study habits. 5
8. Student employment. 2
9. Source of funds. 3
10. Financial aid. 3
11. Scholarships. 2
12. Costs of college attendance. 3
13. Student activities. 2
14. Academic achievement. 4
15. Utilization of personnel services. 3
<table>
<thead>
<tr>
<th>Suggested Topics and Questions for Study</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. Study of graduates.</td>
<td>11</td>
</tr>
<tr>
<td>17. Determine which mode of instruction works best for various types of students.</td>
<td>1</td>
</tr>
<tr>
<td>18. Compare success of students who receive financial aid (loans, scholarships, etc.) with those who do not receive financial aid.</td>
<td>1</td>
</tr>
<tr>
<td>19. Determine the length of time students take to get an Associate Degree.</td>
<td>1</td>
</tr>
<tr>
<td>20. Determine the profile of the reading abilities of every student entering Lake Michigan College.</td>
<td>1</td>
</tr>
<tr>
<td>21. Study why students attend Lake Michigan College, with an emphasis on increased enrollment.</td>
<td>1</td>
</tr>
<tr>
<td>22. How well is each class meeting the needs of the students?</td>
<td>1</td>
</tr>
<tr>
<td>23. What effect does work have on study habits?</td>
<td>2</td>
</tr>
<tr>
<td>24. What impact does school morale have on student motivation?</td>
<td>1</td>
</tr>
<tr>
<td>25. What factors motivate learning?</td>
<td>1</td>
</tr>
<tr>
<td>26. Student satisfactions and dissatisfactions.</td>
<td>1</td>
</tr>
<tr>
<td>27. Analysis of home life pressures on students.</td>
<td>1</td>
</tr>
<tr>
<td>28. Study of students from admissions to successful graduation.</td>
<td>1</td>
</tr>
<tr>
<td>29. How well prepared are the students for further higher education?</td>
<td>1</td>
</tr>
<tr>
<td>Suggested Topics and Questions for Study</td>
<td>Number of Responses</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>30. How can the college effectively provide remedial instruction for those who need it?</td>
<td>1</td>
</tr>
<tr>
<td>31. Non-response for this area.</td>
<td>4</td>
</tr>
</tbody>
</table>

**FACULTY**

1. Faculty characteristics. 1  
2. Faculty work loads. 4  
3. Length of service. 2  
4. Faculty turn-over. 3  
5. Professional activities. 3  
6. Promotions. 1  
7. Salaries. 2  
8. Retirements. 1  
9. Sabbatical leaves. 1  
10. Student credit hour ratios. 2  
11. Satisfactions-dissatisfactions. 5  
12. Academic and personal freedom. 2  
13. Self-evaluation. 1  
14. Student evaluation of faculty. 3  
15. Availability of in-service training. 1  
16. Further education requirements. 1  
17. Understanding and use of available college services within the institution by full- and part-time faculty. 1
<table>
<thead>
<tr>
<th>Suggested Topics and Questions for Study</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>18. Understanding and participation in long-range goals.</td>
<td>1</td>
</tr>
<tr>
<td>19. Analysis of telephone use and availability.</td>
<td>1</td>
</tr>
<tr>
<td>20. Effective methods for sharing responsibility and decision-making.</td>
<td>1</td>
</tr>
<tr>
<td>21. How to obtain qualified substitute teachers.</td>
<td>1</td>
</tr>
<tr>
<td>22. Study communication between faculty and administrators.</td>
<td>1</td>
</tr>
<tr>
<td>23. How should supervising technical laboratories be reflected in faculty work load?</td>
<td>1</td>
</tr>
<tr>
<td>24. How should developmental work be reflected in faculty work load?</td>
<td>1</td>
</tr>
<tr>
<td>25. Extent to which faculty recommendations regarding budgets, teaching loads, facilities, priorities, etc., are received, implemented, or rejected.</td>
<td>1</td>
</tr>
<tr>
<td>26. Comparison of grades given by day-time and extension faculty in all courses taught in the day, night, and at extension centers.</td>
<td>1</td>
</tr>
<tr>
<td>27. Comparison of faculty work load with other community colleges of comparable size.</td>
<td>1</td>
</tr>
<tr>
<td>28. Faculty grading practices.</td>
<td>1</td>
</tr>
<tr>
<td>29. Achievement based on full-time faculty versus part-time faculty.</td>
<td>1</td>
</tr>
<tr>
<td>30. Ranking -- effectiveness and purpose.</td>
<td>1</td>
</tr>
<tr>
<td>31. Non-response for this area.</td>
<td>8</td>
</tr>
</tbody>
</table>
### TABLE 2—Continued

<table>
<thead>
<tr>
<th>Suggested Topics and Questions for Study</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ADMINISTRATION:</strong></td>
<td></td>
</tr>
<tr>
<td>1. Functions.</td>
<td>1</td>
</tr>
<tr>
<td>2. Decision-making procedures.</td>
<td>4</td>
</tr>
<tr>
<td>3. Channels of communication.</td>
<td>11</td>
</tr>
<tr>
<td>4. Relationship to faculty.</td>
<td>9</td>
</tr>
<tr>
<td>5. Clarification of functions and responsibility of the deans.</td>
<td>1</td>
</tr>
<tr>
<td>6. Accountability to students and staff.</td>
<td>1</td>
</tr>
<tr>
<td>7. Definition of hierarchical levels of administration.</td>
<td>1</td>
</tr>
<tr>
<td>8. Administrative effectiveness.</td>
<td>1</td>
</tr>
<tr>
<td>9. Administrative work load.</td>
<td>1</td>
</tr>
<tr>
<td>10. Evaluation of effectiveness in aiding teaching faculty to achieve institutional goals.</td>
<td>1</td>
</tr>
<tr>
<td>11. Non-response in this area.</td>
<td>5</td>
</tr>
<tr>
<td><strong>CURRICULUM AND LIBRARY</strong></td>
<td></td>
</tr>
<tr>
<td>1. Courses listed.</td>
<td>2</td>
</tr>
<tr>
<td>2. Courses offered.</td>
<td>2</td>
</tr>
<tr>
<td>3. Courses repeated.</td>
<td>2</td>
</tr>
<tr>
<td>4. Summer session.</td>
<td>2</td>
</tr>
<tr>
<td>5. Remedial programs.</td>
<td>2</td>
</tr>
<tr>
<td>6. Honors programs.</td>
<td>2</td>
</tr>
<tr>
<td>7. Library holdings.</td>
<td>4</td>
</tr>
<tr>
<td>8. Library circulation.</td>
<td>3</td>
</tr>
<tr>
<td>Suggested Topics and Questions for Study</td>
<td>Number of Responses</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>9. Library acquisitions.</td>
<td>5</td>
</tr>
<tr>
<td>10. Student use of library.</td>
<td>5</td>
</tr>
<tr>
<td>11. Curriculum evaluation as it relates to student needs.</td>
<td>4</td>
</tr>
<tr>
<td>12. How do remedial programs relate to student needs as perceived by employers?</td>
<td>1</td>
</tr>
<tr>
<td>13. What might the college offer that would help students make up deficiencies and make them more employable?</td>
<td>1</td>
</tr>
<tr>
<td>14. Develop criteria to measure relevance of courses and programs.</td>
<td>1</td>
</tr>
<tr>
<td>15. How many books or journals are requested, but are not available?</td>
<td>1</td>
</tr>
<tr>
<td>16. Identification of needed books and cost.</td>
<td>1</td>
</tr>
<tr>
<td>17. Could courses offered only at night be incorporated into day schedule?</td>
<td>1</td>
</tr>
<tr>
<td>18. How many students are involved in canceled courses?</td>
<td>1</td>
</tr>
<tr>
<td>19. How many students request or inquire about courses?</td>
<td>1</td>
</tr>
<tr>
<td>20. What is the student market for individual courses?</td>
<td>1</td>
</tr>
<tr>
<td>21. How many courses are listed, but never offered?</td>
<td>1</td>
</tr>
<tr>
<td>22. Non-response for this area.</td>
<td>10</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Suggested Topics and Questions for Study</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TEACHING METHODS AND INSTRUCTION</strong></td>
<td></td>
</tr>
<tr>
<td>1. Teaching effectiveness.</td>
<td>4</td>
</tr>
<tr>
<td>2. Course evaluation.</td>
<td>3</td>
</tr>
<tr>
<td>3. Class size.</td>
<td>4</td>
</tr>
<tr>
<td>4. Examinations.</td>
<td>3</td>
</tr>
<tr>
<td>5. Grading practices.</td>
<td>8</td>
</tr>
<tr>
<td>6. Programmed instruction.</td>
<td>4</td>
</tr>
<tr>
<td>7. Student credit hour ratios.</td>
<td>3</td>
</tr>
<tr>
<td>8. Innovations and their evaluations.</td>
<td>5</td>
</tr>
<tr>
<td>9. Develop methods for sharing classroom techniques with fellow teachers.</td>
<td>1</td>
</tr>
<tr>
<td>10. Develop behaviorally-stated objectives for each department.</td>
<td>1</td>
</tr>
<tr>
<td>11. What factors tend to motivate adult learners?</td>
<td>1</td>
</tr>
<tr>
<td>12. What are appropriate prerequisites for each department?</td>
<td>1</td>
</tr>
<tr>
<td>13. Are credits earned in a community college transferable to a higher education program?</td>
<td>1</td>
</tr>
<tr>
<td>14. Non-response for this area.</td>
<td>7</td>
</tr>
<tr>
<td><strong>SPACE AND FACILITIES:</strong></td>
<td></td>
</tr>
<tr>
<td>1. Space utilization studies.</td>
<td>4</td>
</tr>
<tr>
<td>2. Student instructional space ratios.</td>
<td>3</td>
</tr>
<tr>
<td>3. Future needs and development.</td>
<td>6</td>
</tr>
<tr>
<td>4. Classroom layout and equipment.</td>
<td>1</td>
</tr>
<tr>
<td>Suggested Topics and Questions for Study</td>
<td>Number of Responses</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>5. Layout for automated instruction of typing.</td>
<td>1</td>
</tr>
<tr>
<td>6. Office facilities.</td>
<td>1</td>
</tr>
<tr>
<td>7. Enter office telephone system.</td>
<td>1</td>
</tr>
<tr>
<td>8. Non-response for this area.</td>
<td>13</td>
</tr>
</tbody>
</table>

**BUDGET AND FINANCE:**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>1. Unit costs.</td>
<td>2</td>
</tr>
<tr>
<td>2. Budget projections.</td>
<td>4</td>
</tr>
<tr>
<td>3. Source of funds.</td>
<td>3</td>
</tr>
<tr>
<td>4. Expenditure of funds.</td>
<td>4</td>
</tr>
<tr>
<td>5. Evaluation of tuition, fees, and student charges.</td>
<td>3</td>
</tr>
<tr>
<td>6. Travel funds.</td>
<td>1</td>
</tr>
<tr>
<td>7. Staff input into final budget priorities.</td>
<td>1</td>
</tr>
<tr>
<td>8. Budgetary long-range planning.</td>
<td>1</td>
</tr>
<tr>
<td>9. Study procedures for allowing faculty to control their budget.</td>
<td>1</td>
</tr>
<tr>
<td>10. Needed funds to operate present programs and develop future programs.</td>
<td>1</td>
</tr>
<tr>
<td>11. Grants available for faculty.</td>
<td>2</td>
</tr>
<tr>
<td>12. Administrative costs versus faculty costs (salaries, fringe benefits, travel, secretarial, supplies).</td>
<td>1</td>
</tr>
<tr>
<td>13. Cost analysis for each department (faculty and administrative).</td>
<td>1</td>
</tr>
</tbody>
</table>
TABLE 2—Continued

<table>
<thead>
<tr>
<th>Suggested Topics and Questions for Study</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. Expenditures of non-educational areas versus educational programs.</td>
<td>1</td>
</tr>
<tr>
<td>15. Non-response for this area.</td>
<td>12</td>
</tr>
</tbody>
</table>

ADMISSIONS AND ENROLLMENT:

1. Admission policies. | 5 |
2. Test scores. | 8 |
3. Characteristics of applicants. | 6 |
4. Course enrollments. | 5 |
5. Enrollment projections. | 4 |
6. Course screening and placement. | 8 |
7. Probation. | 4 |
8. Correlate admission policies and test scores with performance, and with post-education test scores. | 1 |
9. Entrance performance in reading, writing, and mathematics skills. | 1 |
10. Compare "open door" admission with number of students who complete Associate Degree program. | 1 |
11. College admission policies versus departmental criteria. | 1 |
12. Non-response for this area. | 7 |

PUBLIC RELATIONS:

1. Community relationship. | 4 |
2. Special events. | 2 |
3. Use of facilities by outside groups. | 2 |
TABLE 2—Continued

<table>
<thead>
<tr>
<th>Suggested Topics and Questions for Study</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. College service functions to outside groups.</td>
<td>1</td>
</tr>
<tr>
<td>5. Publications.</td>
<td>1</td>
</tr>
<tr>
<td>6. Mass media.</td>
<td>2</td>
</tr>
<tr>
<td>7. Faculty satisfaction/public relations.</td>
<td>1</td>
</tr>
<tr>
<td>8. Non-response for this area.</td>
<td>17</td>
</tr>
</tbody>
</table>

**OTHER**

<table>
<thead>
<tr>
<th></th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Analysis of use, effectiveness, and value of co-op secretarial students by secretaries, administrators, and faculty.</td>
<td>1</td>
</tr>
<tr>
<td>2. Administrative evaluation.</td>
<td>1</td>
</tr>
<tr>
<td>3. Why students select Lake Michigan College.</td>
<td>1</td>
</tr>
<tr>
<td>4. Students' educational priorities (general education, self-improvement, vocation, status).</td>
<td>1</td>
</tr>
<tr>
<td>5. Non-response for this area.</td>
<td>20</td>
</tr>
</tbody>
</table>
May 2, 1978

Jonas M. Dalton
Beechwood Apts. G-41
Berrien Springs, Michigan 49103

Dear Mr. Dalton:

I appreciate very much receiving a copy of your doctoral dissertation on institutional research. I am pleased to have the opportunity to give you my comments. I am leaving for London this week, so am responding quickly even though I plan to spend more time reading your dissertation more thoroughly. I will be at the Association of Institutional Research in Huston from May 21-25 in the event you should plan to attend. I would enjoy talking with you. My background is also mathematics—primarily statistics. I also almost went to work at Bell Labs in 1958, but went the route of education instead. I am the Chairman-Elect of the Kansas section of the American Mathematical Association.

As a preface to my comments on your dissertation, you might like to be briefed on the changes at JCCC. As of last July 1978, I began reporting to the Academic Vice President. The position of Executive Vice President was deleted. Our activities have continued much as before with the exception that we have somewhat increased the percentage of time spent on academic program related research. We always did a fair amount of that type of research before. The remark by an academic division director at a recent academic council meeting best summarizes the overall reaction to the change. Basically, the comment was that it was certainly great to have the institutional research staff in the Academic Branch.

With reference to your proposed model for institutional research, you have certainly done an admirable job in compiling a vast amount of material and synthesizing it. My main comment deals with your choice of the Assistant to the President as the person to whom the Director of Institutional Research reports. I would think that the institution would need to be very stable with respect to the presidency for that to succeed. Frequently, a changeover in presidents results in a changeover in the assistant to the president position. Depending on the role that the assistant to the president played with respect to the institutional research activities, too much change might not permit the continuity of institutional research projects. The other concern I have is that frequently an assistant to the president becomes very involved in day to day activities. The faculty may perceive institutional research as primarily interested in administrative research activities and particularly those to meet immediate needs. Frankly, I think the support of the faculty is very important and I have spent several years just encouraging their respect. I did like your encouraging wide participation in research and planning by members of the faculty and administration.
One area which you have included indirectly but not directly is the need to be current with community data. That, though, does depend on the community. Some data are very difficult to secure. Our office has become known as the first place to call if you need data about the county. The data are useful for monitoring trends in the community plus the community appreciates a central source.

I will be interested to know how the advisory committee works out. I have thought about that, but nothing has materialized. One problem may be to put the priorities of an advisory committee in perspective with the priorities of the administration.

Overall, I think you have developed a model which merits trying. I think it is too easy for a member of your panel to think of their own situation and fail to recognize that each college has its own unique characteristics. What works at one college may not work at Lake Michigan College or vice versa.

I wish you success on your final defense of your dissertation. I can certainly empathize with your last sentence of your acknowledgements.

Sincerely,

Elaine L. Tatham, Ed.D.
Director
Institutional Research

ELT/mek
Dear Jonas:

As you indicated on page 46 of your dissertation - "Each individual, practitioner, or administrator, seems to have different ideas concerning the aims of institutional research." This observation reveals what I believe is the fundamental dilemma in seeking to develop a generalised institutional research model.

What you have carefully delineated as a model for one establishment might well be modified elsewhere and yet remain eminently useful as a management tool. I cite but one instance: a set of theoretical institutional research concepts which are not acceptable to the executive management of a particular institution might well result in materially altering the performance level, (scope, emphasis, priorities, etc.), of the institutional research effort for that particular establishment.

I do believe, however, that your method of approach has been a very sound one, especially in that you elicit the views of those who are to live with the results of such institutional research effort.

My concluding reaction is that in the main you have accomplished what you set out to achieve. Your model can certainly serve as a useful reference model of practical procedures to follow. I would only add that it would also be most revealing to subsequently investigate the extent to which the identified... "informational needs of Lake Michigan College" are, or are not, met through meaningful institutional research performed. "as data been generated to help close such perceived 'informational' gaps ?

As a practitioner, I firmly believe that it is an exercise in futility to file and forget the results of sound institutional research. I would hope that your findings will result in some practical applications.

Sincerely,

Boris Blai, Jr. Ed.D.
Director, Institutional Research
Mr. Jonas M. Dalton  
Beechwood Apts. G-41  
Berrien Springs, MI 49103

Dear Mr. Dalton:

Thank you for a copy of your dissertation. I have read it carefully and have the following remarks:

p. 98—faculty hopes and expectations of institutional research:
   It would be helpful to know the number of faculty making each response. If each is the response of only one person, a sentence indicating this would be beneficial to the reader.

p. 130—conceptual structure for the Office of Institutional Research:

#6. "Have an assurance that institutional research findings will be used." This is idealistic for each finding. A general statement of commitment to the work of institutional research and general use of findings is more realistic.

#9. "Coordinate or conduct studies in new methods of teaching." This might be done in a large Office of Institutional Research, but not in a small one.

#12 and #13. What is the difference between "evaluating" goals and "evaluating how effectively" they are being achieved?

p. 132—objectives or functions of the Office of Institutional Research:

#8. "Serve in an advisory capacity to groups responsible for the development of a management information system." What happens in many places is that the Office of Institutional Research is responsible for the development of a management information system.

#15. "Define institutional goals and objectives." This is very dangerous. Goals and objectives of an institution should not be defined by any one office, but by a representative group of the campus community. This objective may serve to alienate the Office of Institutional Research from the rest of the campus—especially the faculty.
p. 133+—Policies and Procedures for Institutional Research:
I am not quite sure what this section is saying. "Projects" can mean any research projects being done on campus—which is what this section says to me—or any research project of the Office of Institutional Research. If you mean the former then I disagree with many of these policies since then the director of the Office of Institutional Research is acting, as a member of the advisory committee, as a decision maker which is not consistent with some of your earlier statements. If you mean the latter, then these policies are all right, but some explanation of what you mean by "projects" is in order.

I would also like to commend you on the amount of work you did in procuring information from so many sources. I am sure this document will be useful in helping others determine information needs of their colleges and universities and in beginning an Office of Institutional Research.

Good luck to you in the completion of this project and in the future. May God bless you.

Sincerely,

Sister Ann C. Luciano, CSJ
Director of Institutional Research
Readers Comment to: Development of an Institutional Research Model: Lake Michigan College by Jonas M. Dalton

Paul Brantley, Reactant

The author has drafted an unusually comprehensive document concerning a field of endeavor that is of yet still in its youth. The document was written with clarity and was carefully organized and sequenced. It was evident to the reader that a great amount of time and care went into the preparation of this study. The review of the literature on the field is probably the most complete to be found anywhere.

In reference to the organizational chart (p. 127) the suggestion that institutional research should report to the Assistant to President is realistic and appropriate. This provides the office with the liberty it needs to study the entire institution rather than be co-opted by some department with a vested interest.

From the title the reader was interested in the term "Model" and how it would be used in the study. Although the term might have been appropriately defined in the Definition of Terms (p. 16) a definition did later appear in the introduction to chapter 5.

If a model is defined as a "symbolic representation of a complex event", then the model is valid to the extent that the model approximates reality. A model as noted is a simplification in that generally all the variables of the real cannot be symbolized or even identified. This is especially true in the social sciences. Models include "all those variables which the model-builder considers important". The model-builders choice of variables is crucial.
In the past many conceptual typologies—scientific management (Taylor, 1911) administrative management (Gurlick and Arwich, 1937) and bureaucracy (Weber, 1947) have attempted to "model" the awesome complexity of organizations— with mixed results.

One might take the positions that institutions are in a sense open "systems" yet still subject to norms of rationality (James Thompson, 1967). Institutions function in ways that are not necessarily orderly or logical in order to survive in an unpredictable environment.

Although the variables selected for this model (p. 125) are undoubtedly well-chosen, there may "lurk in the shadows" additional variables— institutional politics, funding practices, unique personality styles, organizational climate, etc.— that frequently sabotage the "best laid plans of mice and men." It may be difficult at times to effectively deal with these unpredictable factors. However, the potential significance of such factors must ever be kept in view in planning an institutional research component for the realities of institutional life.

The reader expresses appreciation for this excellent study. One only hopes that before too long a monograph will emerge from this study with a focus to include not only Lake Michigan College but a wider I.R. community as well.
June 6, 1978

Mr. Jonas M. Dalton
Beechwood Apts. G-41
Berrien Springs, Miami 49103

Dear Mr. Dalton:

I have read your dissertation on Development of an Institutional Research Model: Lake Michigan College with great interest and a certain amount of nostalgia. Since March 13, 1978, I have been serving as the Interim President of Cecil Community College and have had the opportunity to view institutional research from a new perspective; therefore, I hope my comments are able to reflect my experience as an institutional researcher and as a chief executive officer.

My comments are as follows:

The model presented in this dissertation is based on the ideal, and to that extent tends to overlook the harsh realities of public college administration during a period of retrenchment and decremental budgeting. To the extent that a model should describe the ideal, I feel Mr. Dalton has done an excellent job, with the exception of the discussion of the advisory committee. The concept of an advisory committee suggests that the institutional researcher is faced with a number of options and requires assistance in identifying and selecting research projects; further, that a group of faculty would be so in touch with the needs of the institution that they could establish a research program for the college. My experience has led me to believe that only one person at the institution can determine the priorities and the special projects of the Office of Institutional Research, and that is the President. Any comprehensive program developed by an advisory committee can, and will, be superseded by the urgent need of the President for research data; thus delaying any planned research project. The end result will be a frustrated committee who sees their advice being ignored and their priorities superseded. Tangential to this is my experience with the college community in general, in which faculty members become concerned about institutional research in direct proportion to the nearness of an approaching self-study by the regional accreditation agency or the expiration of the doctoral dissertation period.

An alternate to the advisory committee is the researcher's involvement in the governing process of the college, to the extent that he becomes sensitive to the information needs of the Board of Trustees, President, advisory committees, faculty senate, and so forth, so that he either provides information subsequent to meetings, conducts studies and has information available at a subsequent meeting, or has requests for information referred to
him in the process of the meeting. This, coupled with a keen anticipation of the information needs of the institution, will dictate the priorities of the office.

Another way of stating the problem is that, on one hand the model proposed by Mr. Dalton suggests that the Director of Institutional Research should report to the highest official possible, preferably the President, and at the same time should rely on the advisory committee to establish priorities. My experience as a researcher has taught me that this is a dilemma in which no one deserves to be placed.

A second observation is the suggestion that the researcher should be a purist and should not be involved in the administration of policies and procedures which he has developed or proposed. Few colleges are large enough to support a specialist. Many researchers are required to be involved in both research and administration. The size of the institution is a major factor.

In no way should my comments be considered negative, as I consider this model to be an excellent proposal and worthy of serious consideration. Thus, I have taken my time to make these comments.

Sincerely yours,

Robert L. Geil
Interim President

RLG/mr
June 9, 1978

Mr. Jonas M. Dalton
Beechwood Apts. G-41
Berrien Springs, MI 49103

Dear Mr. Dalton:

The following is my reaction to your proposed Institutional Research model:

The organization and staff of an Institutional Research office, especially in a small community college, will not be organized on as sophisticated a level as that described in most of your literature. The office will generally be staffed by a secretary and a full-time or part-time director. If the director is part-time, the other responsibilities may include an Assistant to the President, a Grants Officer, or a Management Services Director.

Many smaller community colleges do not have the stability of long-term Institutional Research directors, because either directors move on to other positions or the functions of the office change with succeeding administrations.

Having the Institutional Research Director report to anyone other than the President or the Executive Vice-President tends to weaken the status of the office.

I think it would be helpful in your model to address the question of professional associations. The role of professional associations is perhaps more important to the Institutional Researcher than any other administrative position. There are several very fine research associations, such as the Association for Institutional Research, that help keep the research up-to-date on methodology.

Much of the literature suggests that research studies be done on curriculum development and evaluation. Although this is a worthy goal, the immediate demands on the office usually supersede any studies on curricula.

The role of the Institutional Research office constantly changes depending on requirements for data by federal and state agencies.
Much of the literature discusses the use of advisory committees. In actuality, the value of these committees is minimal. Among my colleagues, there are none who use advisory committees. A better arrangement appears to be to have the Institutional Research director work with various committees within the college to determine its data needs.

One other area that I propose you address, especially in a small school, is the relationship of the Institutional Research office with the center for data processing. It is essential that the Institutional Research office have enough control of the data center to provide for expedient retrieval of information to provide proper management information. This is a new area and to date there has been little written on the subject.

The model that you have developed will be of great value to a college which is in the initial stages of developing an institutional research office. I commend you on the excellent job you have done reviewing the literature on Institutional Research. You have also apparently accomplished a very difficult task of having an institution define its needs for information.

I wish you success in the defense of your study.

Sincerely yours,

Edith H. Carter, Director
Office of Institutional Research

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VITA

Jonas M. Dalton was born June 3, 1926. He attended several high schools before entering Appomattox High School, Appomattox, Virginia; autumn 1941. He spent three years there, graduating in May 1944.

He worked sixteen months before entering Virginia Polytechnic Institute, Blacksburg, Virginia, in January 1946. He returned to the field of employment after two years at Virginia Polytechnic Institute.

In June 1953 he entered George Washington University, Washington, D.C., where he graduated with an A.B. degree in Statistics; June 1955.

In September 1955, he entered Virginia Polytechnic Institute, Blacksburg, Virginia, where he graduated with an M.S. degree in Statistics; June 1958.

In July 1957 he was employed by The Bell Telephone Laboratories, Murray Hill, New Jersey, where he worked fifteen years in Human Engineering Research.

In September 1972 he entered Andrews University where he received secondary certification in Mathematics, and Biology from
the State of Michigan, and an M.A. degree in Educational Administration; June 1975. He continued at Andrews University as a candidate for the Doctor of Education degree in Educational Administration.

He is a member of the American Educational Research Association, The Association for Institutional Research, The American Mathematical Society, and Pi Mu Epsilon.