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Van Cleave, James Powell

PLANNING PROCESSES IN POST-SECONDARY EDUCATIONAL
INSTITUTIONS IN THE STATE OF MICHIGAN: OPPORTUNITIES AND
CONSTRAINTS FOR POLICY-MAKING

Michigan State University

Ph.D. 1983

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EDUCATIONAL INSTITUTIONS IN THE STATE
OF MICHIGAN: OPPORTUNITIES AND CONSTRAINTS
FOR POLICY-MAKING

By

James Powell Van Cleave

A DISSERTATION

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ABSTRACT

PLANNING PROCESSES IN POST-SECONDARY EDUCATIONAL INSTITUTIONS IN THE STATE OF MICHIGAN: OPPORTUNITIES AND CONSTRAINTS FOR POLICY-MAKING

By

James Powell Van Cleave

Problem - Postsecondary educational institutions in the State of Michigan are faced with a turbulent environment and the threat of some form of statewide coordination which could cause the environment to become more tightly coupled and turbulent. The long term issue of autonomy for state institutions tends to exacerbate relations between members of the postsecondary organization-set. State resources are scarce, and many interests, including postsecondary education, are demanding a greater share. The interaction of these issues may lead to some form of statewide planning. There is general agreement that institutions have both the capability and the interest to plan, but it is the outcomes and their cost which are the center of controversy.

Purpose - To investigate the validity of the assumption that postsecondary educational institutions in the State of Michigan are both interested in and capable of planning, and to determine if education indicators are used in the planning process and how they relate to planning assumptions.

Method - The planning attributes possessed by postsecondary education institutions in the State of Michigan were inventoried. Two questionnaires were used to collect data from 282 postsecondary institutions. Survey topics included planning processes and planning style; no attempt was made to evaluate planning effectiveness or the quality of the institution's plan.

Analysis - Twenty-seven of the seventy-seven institutions responding to the initial questionnaire indicated strategic planning processes were implemented. In many cases the planning horizon was short, 1-3 years, and the strategic planning process was not related to the budget preparation process, which half of the institutions reported was based on incremental methodology.

Conclusions and Implications - Limited planning interest, limited planning horizons and incremental budgets indicated that many institutions expect the future to be like the present. The risk, of course, is they will not be prepared for value shifts affecting their public's educational needs and interests, should such changes occur. Of those institutions using strategic planning processes, almost two-thirds indicated use of planning assumptions. Preferred sources for planning assumptions tended to be the president, provost and financial vice president. Faculty, students and outside planning resources had little influence on the development of planning assumptions, in those institutions completing the survey instrument.

To Nancy

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CHAPTER I

INTRODUCTION

Background of the Study

In 1978, the State Representative from the 49th District in Michigan, Dan Angel, published the results of his Higher Education Survey¹ and listed what he concluded to be the ten major policy questions facing taxpayers and scholars.² Each of the ten issues reflected a strategic planning problem for one or more of the members of the state's higher education organization-set: the Legislature; the State Department of Education; the state supported colleges and universities; the private colleges and universities; the community colleges; and proprietary institutions, not included in Angel's survey but an important component of the state's postsecondary educational resources.

The most pervasive of the ten issues was listed first, "Who should be Michigan's planning and coordinating agent in matters of higher education?"³ A 1975 Michigan Supreme Court decision in *Regents of the University of Michigan vs. the State of Michigan*⁴ removed the State Board of Education as the keeper of that trust and, thus, nothing short of a constitutional amendment could restore its

position. This left the appropriations mechanism as the only viable coordinating alternative; a political process.

The responsibility for this regulating void rests with the most recent Constitutional Convention held in 1962, and the members responsible for drafting the Constitution's language pertaining to higher education. More specifically, Article VIII:⁵

State Board of Education; duties.

Sec. 3. . . . It shall serve as the general planning and coordinating body for all public education, including higher education, and shall advise the legislature as to the financial requirements in connection therewith.

Unfortunately, the authors' added some ambiguity to this charge in a subsequent paragraph:

Boards of institutions of higher education, limitation.

The power of the boards of institutions of higher education provided in this constitution to supervise their respective institutions and control and direct the expenditure of the institutions' funds shall not be limited by this section.

The policy issue of autonomy is long standing. The University of Michigan has enjoyed constitutional autonomy since 1850; Michigan State University, 1908; Wayne State University, 1959; and finally, the remaining publicly supported four-year colleges and universities were granted constitutional status in 1963.⁶

The issue of statewide coordination of higher education, from a historical perspective, emerged only recently. The first coordinating board was authorized in the State of Kentucky in 1934, and the first to become operative was in Oklahoma in 1941; by 1969, 48 states, including

Michigan, had some type of coordinating agency. The first governing board, on the other hand, was authorized by the State of New York in 1784.⁷

It was during the 1950s and 1960s, a period of unparalleled growth, that education in general and higher education in particular, underwent dramatic changes; as the need for public support increased, so did the pressure for state control and/or coordination. Institutions responded, predictably, by citing the need for, or, the existence of autonomy.

. . . Increases in government appropriations were matched with increased oversight and questioning both of program objectives and resource use. Threats of withholding money became a tool of legislators and government agencies to obtain compliance with their objectives. Attachment of policy language to appropriation bills required specific actions to be taken and limited the use of funds, but by failing to challenge such regulation for fear of greater retaliation, institutions invited increasing legislative intrusion through the budget process. What had been a partnership between government and academic institutions deteriorated to an adversarial [sic] relationship.⁸

A historial review of higher education in Michigan, beginning with Final Report of the Survey of Higher Education in Michigan, a report prepared by John Dale Russell in 1958, for the Michigan Legislative Study Committee on Higher Education, provides ample evidence of this conflict:

It is recommended that the legislature take immediate steps to create and establish a board for the coordination of the State-controlled program of higher education in Michigan . . . After some experience has been had with its operation, so that details of the necessary provisions have been agreed upon, it might prove desirable to provide constitutional status for the Coordinating Board.⁹

This recommendation was repeated many times by other commissions, panels and committees in the following 25 years.

Few would argue with the assertion that a coordination vacuum existed then, currently exists, and fewer still with the observation that no politically viable solution is in sight; nevertheless, Michigan will spend more than 15 percent of its 1983 general fund budget on higher education.¹⁰ It should also be recognized that additional funds will flow into the postsecondary education sector of the state's economy from private organizations and institutions, philanthropies, Federal and local governments, and tuition from students. The importance of postsecondary education to the state's economy should be obvious; less clear is how it should be managed, if at all.

As controversial as the issue of coordination was during periods of growth it is likely to become further exacerbated by declining public support; reduced enrollments, stemming from out-migration and a long-term trend of diminishing fertility rates; and other changes, as evidenced by shifting demographic and cultural patterns. Each of these factors will contribute to the retrenchment syndrome manifest by many colleges and universities.¹¹ More aggressive institutions, on the other hand, will rely on innovation; redirect their focus; or, even make significant changes in mission, role or scope hoping to attract students.¹²

Admission standards may be lowered by some institutions; others may reduce the quality of programs, or the availability of services in order to be more "competitive." The changing role of proprietary institutions and the increasing appearance of industry sponsored programs in high/low technology areas, which are often ignored by higher education and too expensive for proprietary institutions, will add a new, competitive element to the potpourri of postsecondary options available to learners.

College and university administrators will . . . be challenged to maintain necessary institutional independence by resisting excessive regulation, oversight, and intrusion that may accompany funds, whether from government, industry, or individuals. Faculty will be challenged to protect program quality in the face of strong financial incentives to lower standards in order to maintain enrollments.¹³

For the reasons noted above, and others, limiting the state's coordinating role to higher education, as difficult as even that task has proven to be, may not result in the right mix of educational goods; "coordination" of all postsecondary education may be required.¹⁴

An Economic Metamorphosis

Michigan is in the midst of economic change so disruptive and debilitating as to cast serious doubt on its ability to remain financially viable. While the rest of the nation looks with some optimism for signs marking an end to the worse recession in fifty years, Michigan's economic trough appears bottomless to many. One reason for such

pessimism is the state's historical reliance on the automobile industry as the principal contributor to its Gross State Product.

Michigan and other Great Lakes and North-East States developed economic infrastructures to accommodate the growth of heavy industry which required cheap transportation facilities; close proximity to natural resources and markets for its products; as well as a suitable labor pool. Many of these industries, including steel and automotive, have allowed the net investment in plant and equipment to decline in recent years, for a variety of reasons, sharply reducing their ability to compete with less expensive imports. Even with government incentives to build more modern, efficient facilities it is unlikely those industries will return to the dominant position they previously enjoyed in world markets.

By the end of the second World War, the industrial revolution was beginning to give way to the knowledge revolution; apparently the early signs of this change went unnoticed by many policy makers in Michigan. Suddenly, the great waterways, railways and newly built roadways were obsolete; markets shifted to the South and West; metal working and assembly skills, available in seemingly unlimited quantities, were no longer needed by companies operating at a fraction of capacity; or, they were replaced with robotics and computers by the few businesses still able to mechanize.

Lumber and iron ore which had attracted industry to Michigan at the beginning of the 20th century,¹⁵ were displaced, either competitively or technologically, by lower cost materials available in other regions. By 1983, processing material has become less important to the nation's economy than processing ideas and information. Michigan, unfortunately, lags far behind other areas of the country when comparisons are made by prospective, high technology industries looking for plant sites near labor pools which possess the skills they require; and the added incentive of economic and political infrastructures geared to the needs of a diverse industrial base.¹⁶

Michigan must now concentrate on developing policies which will rapidly shift its focus from an industrial economy based on automotive related products, to one which encourages diversity: from agriculture and autos to silicon, software, satellites, and tourism. Old interests in resources such as lumber, mining and fishing must be revitalized and combined with development of more recently discovered resources, such as petroleum. In addition to the need for innovation, there is a greater need for policies which are both far-sighted and cohesive.

A reasonable place to start the retooling of the state's economy is in the vital area of postsecondary education. But should this effort proceed under a policy of laissez faire, or should the state assume a husbandry posture, squeezing as much utility as possible from this

vital resource? The question as framed is actually too simplistic. A far more pluralistic, if not divisive set of forces will make the final determination. Ryan has noted:

The more valuable the university becomes to both the conservators and changers of society, the more each will bring pressure, including political pressure, to bear on university decision-making.¹⁷

The problem, however, is not one limited to the political arena. Policy must be based on leadership, the presence of consensus of at least a strong coalition capable of identifying social needs and positing solutions consistent with resource availability. The "Policy making is taken to mean a long and continuing set of activities involving feedback."¹⁸ Such policy one might hope, would be the result of informed debate, informed in the sense that the question is one of how a need should be addressed, and not on the existence of that need. An example, with a certain immediacy, is how to deal with unemployment. Although there is general agreement that unemployment exists, the debate, a political process, is focused on how it should be reduced.

Political indicators are measures of political conditions, whether relevant to the internal processes of government or external conditions. . . . the significance of social and economic indicators in policy-making is determined by their status as political indicators.¹⁹

No such basis for describing the attributes of education have been agreed to. Worse, there are no reliable indicators which decision makers regularly use to describe what kind of changes "education" should be compatible with;

propagate; or initiate to effect social goals implicit in existing public policy. Indicator research, across a broad social spectrum, has been reported for more than twenty years; on the more narrowly defined subject of economics and particularly welfare economics, it has seen prolific reporting for many more years.

Education has not received very great attention, however, perhaps because of its mystique, but more probably, due to its lack of definition. What is it? How can or should it be measured? When is it performing satisfactorily? What indicators can be used by policy makers and administrators to determine whether or not it is fulfilling its purpose and is responsive to social needs? Educators claim these questions are so complex as to make generalized statements, and performance criteria meaningless, except in local situations. The result has been ambiguity on the part of educational administrators, and, often, ambivalence on the part of education's publics. Policy, directed at "education," nevertheless, has been formulated on local, state and national levels. If indicators of need or performance were not available, then what "guidelines" were used by policy-makers? Rose offers a possible insight based on role values. He suggests three ideal-type roles:

The politician's role is that of a broker, specially valuing the esteem of others. His type of information is likely to be unreliable and non-quantifiable. The administrator's role emphasizes concern with procedural aspects of policy: such information may not be quantifiable, but it is

likely to be reliable, . . . A third . . . role is that of the expert, who will seek information concerning features of policies that relate to the field in which his expertise lies.²⁰

The point, of course, is that policy will be formulated regardless of the protestations by educators that political expediency is a poor substitute for pedagogy.

How can "education" be coordinated if it cannot be described? How can educational institutions design products and produce educational goods if they are unaware of the market except through the balloting process of admissions, which is at best an ordinal guide? Does institutional autonomy result in adaptability to better serve the educational needs of the public? Does institutional autonomy lead to an adequate use of education indicators in institutional planning processes? Is there any indication that more responsiveness to societal needs could be achieved through coordinated planning efforts? Must and is planning done on an individual institutional basis, or are institutional efforts weak and inconsistent, with autonomy resulting in an overemphasis upon the maintenance of institutional integrity and an underemphasis upon adaptability and responsiveness? These are questions which may not be pertinent as one discovers what actually is happening in the institutional use of education indicators in the planning process. On the other hand, such data may lead to the conclusion that relatively little use is made of lead education indicators in the planning process, resulting in modest, if any, institutional efforts to adapt rapidly to

changing needs! Perhaps, an adequate perception of the utility of generally accepted lead indicators in the planning process, would be a great asset to postsecondary educational institutions in serving public needs and wants.

Statement of the Problem

Proponents of statewide coordination for postsecondary educational institutions rely, implicitly, on the assumption that although satisfactory coordination of resources is occurring at the institutional level to promote its parochial interests, the broader, long-term needs of the state may not be met, or, if they are, the cost will be greater than necessary, Glenny, 1959; Berdahl; 1971; Glenny et al, 1971; Educational Commission of the States, 1971, 1973 and 1981.²¹ The Michigan Citizens Committee on Higher Education offered the following guideline in March, 1965.

As the Citizens Committee views it, coordination of higher education means (1) to coordinate the distribution of institutions and types of institutions throughout the state according to predetermined criteria for the establishment of new institutions, and (2) to coordinate the offering of undergraduate-professional programs among the institutions. This must be carried out in such a way as to preserve and encourage the aggressive and creative qualities expected of autonomous institutions and at the same time to prevent unnecessarily inefficient and wasteful duplication and uniformity of educational programs that may result from sheer imitation and from competition for sheer institutional size, comprehensiveness, and prestige.

Any institution in the state should be permitted to offer any education program provided the State Board of Education is satisfied that (1) there is a social need for it, (2) there is a valid unsatisfied student demand for it, and (3) the institution is well qualified in scholarly

tradition, staff, facilities, and location to offer it effectively, efficiently, and economically.²²

Proponents of autonomy for postsecondary educational institutions, on the other hand, rely implicitly on the assumption that what is good for the institution will, in the final analysis be good for the state.²³ More specifically, they believe that a laissez faire attitude toward their governance, combined with the academic freedom and entrepreneurial interests of their faculties', will combine to effect the adoption of a rational set of imperatives favoring both the institution's clientele and the long-term needs of the state. Success in meeting the state's needs will be manifest by efficient and effective utilization of the aggregate educational resource, facilitated through voluntary cooperation of the institutions.²⁴

But what if the capacity to plan, assumed by both sides, is not in place? Could the capacity to plan be a myth? Or, perhaps it has atrophied due to disuse? Or more likely, some variability exists among the institutions in their ability to plan, or their awareness of the need to plan? Whatever the case, the forces for improved utilization of educational resources would need to face an administrative problem of such magnitude as to overarch the political/power issue of autonomy vs. state coordination. Folger has considered this possibility and concluded:

The . . . question relates to the technical basis for planning: Are current methods of projecting the major influences on the development

of higher education adequate? Do we have the techniques necessary for providing rational solutions to complex educational problems? . . .

The answers to these questions are not very reassuring: examples of poor techniques are more abundant than examples of effective techniques . . .

We must conclude, then, that planning technology is not very far advanced and that our data and methodology may be inadequate for planning the best way to achieve our educational objectives.
 . . .²⁵

Ten years earlier Brumbaugh was moved to assert, "Careful statewide planning is the key to an effective system of higher education. . . ." ²⁶ The political rhetoric obscured the reality of planning practice limitations.

Knowledge of the current status of planning practices employed by postsecondary educational institutions could aid in confirming the efficacy of one assumption over the other, but, more importantly, may facilitate the enactment of policies, public and private, to encourage improved planning practices and coordination of educational resources, without abridgment of institutional values.²⁷

Purpose of the Study

This study is designed to examine the planning practices of postsecondary educational institutions in the State of Michigan for indicants of style and commitment in meeting their strategic goals and the long-term educational needs of the state.

If colleges and universities are to turn adversity to opportunity in the turbulent 1980s, planning must be viewed as a management process with controlled change as its objective. It cannot be a separate activity conducted apart from other decision processes.²⁸

This, the central thrust of the study, can be divided into three discrete focal areas:

Focus I Explore the planning attributes inventory of postsecondary educational institutions in terms of:

Strategy: Goals; environmental indicators; organizational resources and climate; futurity, planning horizon

Structure: Planning variables; formal, comprehensive; informal; and strategic

Performance: External indicators
Internal indicators

Focus II Explore the efficacy, based on the planning attributes inventory, of one or both (autonomy, statewide coordination) political models as an implemented system using existing planning processes; or, if a new political model is required to ensure an adequate postsecondary education delivery system

Focus III Explore the possibility, if one exists, that the casual use of indicators by the institutions surveyed suggests a pattern which could lead to the institutionalization of educational indicators in the State of Michigan

Value of Study

It is hoped this study will contribute in both practical and theoretical ways:

1. to the identification of lead education indicators and their use by policy makers to facilitate the coordination of postsecondary educational resources in the State of Michigan;
2. to a better understanding of the planning process as practiced by postsecondary education institutions in the State of Michigan and
3. to the more efficient and effective utilization of scarce state resources, while providing greater variety and higher quality educational experience to all who wish to learn without diminution of academic freedom.

Limitations of Study

This study is descriptive and exploratory. Its scope is limited to higher education institutions in the State of Michigan and other postsecondary education institutions regulated by either the Michigan Department of Education or a state licensing agency. Its focus is limited to planning process and style with emphasis on planning assumptions which may suggest the informal use of education indicators. The study is not designed to evaluate the quality of plans or the results of planning. A further limitation is the availability of data describing each institution's planning practices and structure. This problem

is manifest in two ways: 1) the willingness of the institution's president to participate in the study and 2) the knowledge of planning practices and structure possessed by the survey coordinator selected by the president, when s/he was unable to complete the instrument personally.

Assumptions

1. Postsecondary educational institutions recognize the need for long-range planning and many have developed their own strategic plans.
2. Many postsecondary educational institutions use a planning horizon which is greater than three years.
3. Mission, role and scope will significantly influence the selection of planning criteria by the institution.
4. Assumptions about the future provide a "map" for strategic planning and policy making.
5. The type of indicator(s) selected by the institution in developing the assumption-set reflects leadership traits and environmental perspectives.
6. The mission of the institution is closely related to the major segment, domain, of postsecondary education it serves, but this relationship is dynamic; that is, each major segment has a life cycle, as does each institution within that segment.
7. Effective coordination of postsecondary education at the state level is possible through the utilization of budgeting processes and lead education indicators to effect public policies by the legislature, which

are designed to maintain a dynamic equilibrium between supply and demand for educational "goods."

8. The state legislature and the governing boards for state institutions would agree that some degree of coordination is both reasonable and desirable.
9. All parties participating in the planning process, including private institutions, are, or could be, motivated to join in a cooperative effort to improve the utilization of postsecondary education facilities.
10. Statewide planning coordination to be viable, must be both effective and transparent, vis., the autonomy of each participating institution.
11. The ultimate purpose of postsecondary education coordination is the formulation of compatible policies by all members of the organization set, and without public policies promoting coordination, it cannot be achieved.
12. A uniform strategic planning system for postsecondary education institutions is possible and desirable.
13. Identifying those education indicators presently used by postsecondary institutions is required as one of several initial efforts to develop a uniform strategic planning system.
14. It is possible to develop a system for coordinating postsecondary education in Michigan, which is both effective and efficient in terms of satisfying a variety of learning needs and politically viable to assure continuity and public support.

Definition of Terms

The following terms were selected for comment and/or definition at this point because of their importance and centrality to the study. Many more terms will be defined and/or explained as they appear in the text.

Autonomy, the right of self-determination. Michigan was the first state to grant constitutional autonomy to its institutions of higher education. The University of Michigan was first to receive this treatment in 1850. This means that, in the state of Michigan, the Board of Trustees for each state university and college is constitutionally equivalent to every other state agency or executive including the Governor. There is no position superior to, or able to exert its will on, the institution.

Heteronomy, the state of being subject to the rule of authority of another; the opposite of autonomy.

Statewide coordination, the adding of an organization, or new role to an already existing organization, for the purpose of collecting and disseminating information to all members of the organization set of postsecondary institutions. The new organization, or role for an established organization would be controlled by or became a part of a state agency; for example, the Legislature or the State Department of Education. In addition to controlling the flow of information the coordinating organization would also, in consultation with the other members of the organization set, develop master plans and recommend funding arrangements.

Organization-set, includes all of the postsecondary educational institutions; all state agencies they regularly interact with; special interest groups; suppliers, and other groups and organizations having an interest in educational inputs, processes and outputs.

Focal organization, a relatively formal collectivity created for the purpose of achieving one or more collective goals on a relatively continuous basis. It is characterized by identifiable boundaries encompassing a primary domain; norms and values; groups and subgroups structured with authority relationships, engaged in tasks or goal related activities, based on an incentive system. The bonding agent is communications. Focal refers to a specific organization which is the subject of interest.

Organizational domain, a pattern of interdependence with various environmental elements: students, faculty, regulatory agencies, unions, competitive institutions, associations, staff, special interest groups, suppliers, etc. "Domain" represents ". . . the claims that the organization has staked out for itself. These claims are asserted in terms of the following: 1. the range of products (goods or services) the organization produces; 2. the population of actual or potential customers served; and 3. services rendered."²⁹

Environment-General, consists of five sectors, social, economic, political, scientific/technological and regulatory. These sectors are relative in importance to the

focal organization, they have little direct influence on it and will not be influenced by it, in the near term, in any significant way. Future turbulence correlates in the specific environment may be found in the present general environment.

Environment--operating, available and specific, these qualifying terms are rough equivalents. This environment also consists of five sectors: social, economic, political, scientific/technological and regulatory. Each sector is important but not equally important; their significance shifts and is dependent on relations between the focal organization and members of the organizational set, and the positioning of the organizational domain. Here the focal organization is relatively more influential than in the general environment, and the level of uncertainty is significantly reduced.

Organization climate, is a reflection of its character--how those individuals coming in contact with the organization perceive it. The term character is complex in the sense that it refers to both objective criteria, such as type of communication and task specialization performed; and psychological attributes manifest in perceptions; such as, felt attraction and satisfaction with performance.³⁰

Education indicators, have an analogue in economic indicators. One characteristic is a statistical time series that reflects changes in those sectors of society influenced by education and in this sense they are output

descriptive;³¹ other characteristics also may include: analytic, program evaluation, policy development and normative consideration.³² Sheldon and Freeman, however, take issue, suggesting that the setting of goals and priorities, and evaluation of programs are impossible uses of indicators; but add, they do have potential for: ". . . (1) improved descriptive reporting; (2) the analysis of social change; and (3) the prediction of future social events and social life."³³

Assumptions (premises), are surrogates for facts. When dealing with education futures some uncertainty is likely to exist concerning events, outcomes and contingencies while developing even the most general planning cases; as the need for detail increases so will the degree of uncertainty. So that the plan can be formulated, even in the absence of facts, assumptions are substituted until more concrete data are available which can then replace the assumptions(s); this updating is continuous and cumulative until aggregate data suggest a need for plan or policy revision(s).

Planning, is a conscious process by which an institution assesses its current state and the likely (assumption(s)) future condition of its environment, identifies possible future states for itself, and then develops organizational strategies, policies, and procedures for selecting and getting to one or more of them.³⁴

Policy, is both a plan and the product of the process, planning. It is prescriptive, generally, setting out guidelines for achieving specific goals or objectives which are congruent with its organizational mission, its organizational climate, and its organizational domain.

Overview

Chapter II contains a review of the literature which contributed to the analytical "tools" used to design the study and evaluate the research data. The literature reviewed includes: planning theory and administrative practices; organization theory, from a sociological perspective based on general system concepts; organizational development and management; and environmental analysis, from sociological, managerial, political, educational, and technological perspectives. The welding together of ideas, notions, metaphors, concepts, theories, and even paradigms from these different and sometimes disparate disciplines provided a rich source for analytical constructs; and clearer understanding of the imperatives for new planning designs, or at least the relaxing of forces preventing existing planning "tools" from being utilized to help resolve tenuous relationships which threaten centuries old values and even more importantly, public trust.

The use of educational indicators by state policy formulators and institutional decision-makers could reduce, if not end, the debate surrounding an organizational solution for optimizing the use of educational resources

between advocates of institutional autonomy and statewide coordination. Replacing the saga(s) of educational pedagogy and the mystique of "product" correlates with more concrete information, if not accurate measures, for designing, processing and evaluating educational goods and their secondary, even tertiary affects, is a required first step toward that goal. Van Alstyne has noted:

We cannot wait. While striving to develop more comprehensive conceptual frameworks for defining and interpreting indicators in postsecondary education, and while recognizing both the analytical and the political risks of misusing, or simple using, possible misleading data, we should go ahead trying to construct indicators from existing data, with the conviction that the active use of data is essential to improving the collection, processing and interpretation of such data.⁵⁵

Indicators may, in fact, already be in use; disguised as assumptions. Many of these assumptions may lack verification and be shared by only a few individuals holding advisory positions close to the policy/decision makers. These assumptions, most likely, reflect "reality" based on indicants which may vary in substance and form from occasion to occasion, and often are not recorded for use by future administrations or even by the same administrators when new "reality" makes changes to existing policies necessary. A major question, then, is how do postsecondary educational planners develop and use assumptions, and can this knowledge lead to more abstract, aggregated, and generalizable educational indicators that would be used by both state and institutional policy makers? If both parties

could shift the debate from what is reality, to how best to cope with reality, it seems reasonable that policy could effectively provide coordination for achieving desired ends.

The review of literature follows this logic-set: first, by noting the evolution of planning theory to analytical tools suitable for educational institutions; second, by noting the availability of organization designs compatible with mission selection and management style; third, confirming the notion that organization constraints are found in the environment, necessitating strategies to identify and manage environmental relations; finally, the application of planning theory, in an organization-environment context is explored with the objective of identifying viable analytical methods to provide information for policy makers charged with the responsibility of providing suitable, adequate educational opportunities for Michigan's citizens.

The research design is fully described in Chapter III. Responses to the survey are reported in Chapter IV; and the research implications for higher educational planning in the State of Michigan, along with recommendations are reported in Chapter V.

NOTES

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CHAPTER II

REVIEW OF LITERATURE

The authors in the literature reviewed for this study focused on three themes: planning theory, the process; organization/environment theory, the planning context; and policy or strategic theory, the planning product. Each of these themes overlap to some extent, making it desirable to utilize an analytical framework to achieve a synthesis which is both parsimonious and substantive: organization and environment are the units of analysis; strategy, structure, and performance are the analytical variables.¹

The Planning Process

Planning was included as a management function by Fayol² more than sixty years ago and along with Gulick, Taylor, Urwick and others is associated with a management philosophy which is variously known as scientific management or classical organization theory. This "school" claims many management concepts, including the planning imperative, which were prominent during the 1930s and 1940s.³ Yet, planning in a formal nonmilitary sense, other than budgeting, was not widely practiced until the 1950s, even by industrial organizations. There is even some debate over whether a budget is a plan, or a political process.⁴ Jones

and Trentin provide a definition which is consistent with the usage found in this study:

A budget can be regarded as primarily a plan or goal or objective, and we know of no better definition of budgeting than to say it is primarily a planning and control system. Each word in that definition is important for a full understanding of budgeting's proper role. The planning and control aspects relate to the fundamentals of the management process. . . . To regard budgeting as a system is most important, because this implies a continuing process through the year--the key to good budgeting in any business operation.⁵

As a plan, the budget is clearly the most detailed and quantitative but even here a great deal of variability exists between functional forms, such as master budgets; and budgeting methods. Caruthers and Orwig suggest ". . . that incremental budgeting; formula budgeting; planning, programming, and budget systems; zero-base budgeting and performance budgeting are representative of the most frequently discussed and practiced methods today." The following definitions are used in this study:⁶

Incremental Budgeting, each line item is either considered for an increment or remains unadjusted in the base. Frequently, increments are calculated as uniform percentage adjustments for every line item or group of line items.

Formula Budgeting is an objective procedure for estimating the future budgetary requirements of an institution by manipulating data about future programs and by utilizing relationships between programs and cost.

Planning, Programming, and Budgeting Systems is a managerial technique designed to merge the planning process with the allocation of funds by making it impossible to allocate funds without planning.

Zero-Base Budgeting assumes nothing about prior budgets but starts from zero each year to build a new budget.

Performance Budgeting pertains to activities, not to objectives. Its principal thrust is to improve work efficiency by means of activity classification and work/cost measurements.

Incremental budgeting is the oldest, dating back to the early 1920s, and most frequently used method; however, some authors⁷ believe the trend is toward more systematic budgeting methods in postsecondary educational institutions. Higher level, more comprehensive planning methods have also emerged in a slow, fragmented way, with the influence of various disciplines shaping and directing that development. Of the several management imperatives suggested by Fayol, planning has been perhaps the slowest to find acceptance by both business and educational leaders.

When the text Long-Range Planning For Management was published in 1958, it became the first book on the subject and ". . . the number of articles on planning in business magazines was relatively small, and only a handful of companies had organized formally and systematically for long-range planning."⁸ Nevertheless, Tickton,⁹ in 1959, reported a case study of one small liberal arts college, which along with several others had developed a technique for projecting fiscal needs over a ten-year planning horizon; education and industry were almost equally positioned to implement the few state-of-the-art planning techniques available in the late 1950s.

Planning Theory

LeBreton and Henning also observed that the planning literature was not well developed prior to the 1960s. In fact, they explained, "We were prompted to write this book . . . because of a void in the literature on management theory: an absence of writing dealing with the planning function."¹⁰ In the two decades to follow, however, that literary void was more than filled; hundreds of books and thousands of articles were written on the subject of planning. During this period many organizations, both private and public, including postsecondary educational institutions, implemented planning systems. The framework LeBreton and Henning developed ". . . consists of three parts: the planning process, the dimensions or characteristics of a plan, and the influence a given set of dimensions will have on the planning process." In developing their general theory of planning they utilized theory from existing fields of study such as, communications, decision-making and persuasion.¹¹

Planning, seen as the integrating dimension of management, facilitating the establishment of objectives and goals, the development of policies and procedures, and the allocation of resources rather than as a function incorporating these activities, is central to LeBreton's and Henning's planning theory. Of course, planning is also a task as seen by Fayol and many others which becomes increasingly important as the sphere of responsibility

expands. In fact, it is this recognition of planning that led to the creation of the staff functions in organizations which are so complex that the planning process itself must be coordinated.¹²

The plan envisaged by LeBreton and Henning was formal. It could be described in very concrete terms. In fact, they list eleven (11) areas which every plan should address.¹³ They also list thirteen (13) dimensions of a formal plan and a principle for each one.¹⁴ Boxx and Johnson, however, did not find detailed planning of the type suggested by LeBreton and Henning. Reporting the results of a recent study covering 220 colleges and universities they found ". . . that many institution's are not engaged in a thorough and comprehensive type of planning. In many instances planning is done sporadically, it is vague, and it is seldom communicated to others in concrete detail."¹⁵

Quantitative Planning Factors

Jedamus and Peterson make a similar observation, but in a totally different context. They comment in the preface of their text Improving Academic Management, published in 1980, "Five years ago, a book of this nature would not have been possible for this range of readers. [Faculty, staff and chief administrative officers] Institutional research and planning were seldom related . . . and planning was overcommitted to the manipulation of simulation techniques."¹⁶

There was little doubt the computer represented the educational planning vehicle of the 1970s; however, the planning perspective of the institution remained unchanged.

Before the computer the best solutions were reached by intuition and by random evaluation of possible alternatives. . . .

What is needed is a conceptual framework within which the complex interrelationships of a university's operations can be viewed as a coherent system. Systems planning provides an approach whereby key university problems can be stated in a form appropriate for mathematical analysis.¹⁷

Comprehensive planning models of this type were operational at the University of California, Michigan State University, University of Toronto, University of Rochester, Loyola College of Baltimore, Maryland, and other institutions by 1970.¹⁸

The system implemented at Loyola College was designed by George F. Keane and James N. Daniel, Jr., members of the consulting firm Peat, Marwick, Mitchell and Company. Seven other colleges participated in this project with Park College, Kansas City, Missouri having the lead designation. The system was named Search; an acronym for System for Exploring Alternative Resource Commitments in Higher Education. The system, it was claimed, was powerful enough to satisfy the planning needs of institutions both small and large, simple and complex. It had sufficient capacity for 522 state variables.

Under the leadership of Park College, a group of eight colleges was assembled to undertake, a long-range planning project with two major objectives:

1. To train key administrators and planning officers in the concepts, techniques and organization of overall institutional planning
2. To design and implement mathematical simulation which makes possible the exploration of a wide range of planning alternatives by enabling the planners to project resources, resource demands, and institutional characteristics quickly and easily for each alternative they wish to consider.¹⁹

The model, Comprehensive Analytical Methods for Planning in University Systems, Campus, was initially developed in 1965. A recent version of this system and others such as the Resource Requirements Planning Model, RRPM, designed for academic resource allocation were judged to be ". . . seriously incomplete when applied to complex research universities, since they consider neither quality-of-education variables nor the joint-product character of graduate education and research (i.e., the fact that they tend to be produced jointly from the same inputs)."²⁰ The concern expressed here by Hopkins and Massy is whether the relatively high cost of limited application systems can be justified.

Bleau, however, argues that limited application systems such as faculty flow models are beneficial as planning aids and will help institutions respond to changing enrollment patterns while: maintaining a high quality faculty; keep instructional costs down, and continue to attract promising young scholars. She reviewed a variety of models and techniques including both three state and two state models which she found inferior to Markov-Chain

models;²¹ Hopkins and Massy, however, were somewhat less enthusiastic, but also acknowledge some advantages favoring Markov-Chain models and offer several alternative approaches.²² Faculty flow models reviewed by Bleau include: The Stanford Model; The Oregon State Model; The Academic Flow Model (Based on EDUCOM); The USC Faculty Planning Model and The Purdue Faculty Projection Models.²³

In addition to comprehensive and special purpose models for colleges and universities several large scale models of the economy have been developed. Conceptualized on the same scale, Stone²⁴ described a model of the educational system in Great Britain. It was designed to work out the present implications of future levels of educational activity as determined by the evolution of the demand for places on the one hand and the economic demand for the products of education on the other. The author argued that economic and social activity models should be thought of as a set of linked models operating by means of exchange of information rather than in terms of a single monolithic structure. Interestingly, the logic of the model treats demand for places in higher education as a multi-stage epidemic. Tinbergen²⁵ has also developed several econometric models of education.

In a wide ranging review of education and educational planning models that covers both macro, region and national; and micro, institution level models, Hector Correa offers this definition for a model:

. . . (1) a set of variables classified as endogenous and exogenous; (2) the cause-effect relationships among these variables; and (3) the consistency of these relationships. By 'consistency' I mean that, whenever the values of the exogenous variable are specified, the values of the endogenous variables can be determined in one and only one way. . . .

Models are attempts to 'explain' the phenomena characterized by the endogenous variables. By definition, a phenomenon is explained when a model of it is constructed, that is, when the values of its endogenous variables can be determined, given those of the exogenous variables.²⁶

Quantitative methods, including models, which deal with broad aspects of the postsecondary education organization and its environment are of considerable interest to the research in this study, but not central to it; nevertheless, methodologically speaking they are perhaps the more advanced of the several planning techniques reviewed. It is important, however, not to lose sight of the objective of modeling, to explain reality. To the extent models perform this function they, as will be seen later, are an important planning "tool;" not all models need to be, or even can be based on mathematical expressions:

A verbal model is better than no model at all, or a model which, because it can be formulated mathematically, is forcibly imposed upon and falsifies reality. . . .

Mathematics essentially means the existence of an algorithm which is much more precise than that of ordinary language.²⁷

The development of planning models for higher education applications has progressed steadily since the early 1960s and is likely to continue. However, other factors of equal, if not greater, importance to the

development of planning theory and practice were also emerging as early as the 1960s.

Qualitative Planning Factors

A long term interest in organization environment by three somewhat diverse disciplines have recently coalesced to form a "school" of organization theory which could be explained in terms of an ecological planning model; the population--ecology model,²⁸ or the ecosystem.²⁹

The language of this school of thought is decisively anthropomorphic: environments act, organizations respond; environments select some organization's for extinction, and allow others to survive. . . .

Organizations can be said to exist in an ecological setting, just as the pond is an ecological setting for fish. Independent of any of the individuals in these organizations or individuals directing them, they maybe subject to laws governing the competition for resources; they may have the ability to adapt to changes in the pond, to retain adaptive forms or programs within them; and to grow complex as the pond grows complex. Principles formulated for general systems theory, such as the law of requisite variety, are adapted: Organization structure should be only as complex as the complexity existing in the environment. To be less complex reduces adaptability; to be more complex signifies waste.³⁰

Interest in the organization's environment has its sociological roots in human relations theory, popular until the mid-1960s; followed by contingency theory and the technological school represented by theorists such as Thompson, Lawrence and Lorsch, and Perrow.³¹ Essential, however, to the progress of social scientists during this period was a growing concern held by management theorists that some organizational problems required explanations

which could not be found within the firm; and the developmental work by general system theorists. The fact that some researchers such as Bertalanffy, Boulding, Ackoff, Parsons, and Simon wore more than one intellectual "hat" was significant in providing a vehicle for the needed theoretical synergy.³²

Actually, the external environment of organization's began attracting the attention of management in the 1950s. This attention was due in part to a growing concern that a techno-economic mismatch existed between products and services on the one hand and the demands of the market place on the other. Ansoff and Hayes³³ refer to this malaise as the strategic problem. The solution, they assert, was to be found by evaluating the opportunities offered by the external environment and the strengths and weaknesses of the organization (organizational climate), then selecting the best match consistent with the mission of the organization.

The second source of interest in the external environment stemmed from a growing realization that both workers and management could have goals separate and different from those of the organization,³⁴ and the notion of a hierarchy of roles, linking internal levels of the organization to the external environment.³⁵

A third force gaining momentum during the 1950s was general system theory. The movement was helped considerably with an article appearing in Science by von Bertalanffy in 1950, titled "The Theory of Open Systems in Physics and

Biology, "Emery demonstrated the importance of general system theory to sociology and management by synthesizing six principles enunciated by an early contributor, Kohler,³⁶ in 1938, with the major thrust of the concerns of management and the organization concepts noted above:

1. The construct boundary, as a system property is recognized and the maintenance of the organization's boundary with its environment is posited as management's primary task if the enterprise is to survive.
2. The concept of equilibrium, as a system property is used to differentiate between open and closed systems. Whereas equilibrium is the goal of a closed system, in open systems the goal is to establish those forms of interdependence that enable the system (organization) to maximize its potential for energy or capacity for work.
3. The desired result, a steady state, can only be achieved when the direction, mission, of the enterprise remains constant and maintains a "rate of progress" toward that end and is within - tolerable limits. Stated another way, ". . . an enterprise cannot hope to achieve steady state (except accidentally) unless it sets a mission for itself in terms of outcomes that are capable of achievement and yet are sufficiently beyond present performance to allow for some measurable degree of progress."³⁷

4. To maintain a steady state, management must constantly balance the organization's "capacity" with environmental "demand." The ability to achieve this match would imply that both actual and potential values are known in each case. This would indicate continuous monitoring of the internal and external environment with sensitive measures.
5. Yet, maintaining a steady state requires more than measurement or even regulation. "In a human organization, the two requirements for a steady state, unidirectionality and progress, can be achieved only by leadership and commitment."³⁸ This requires goals which are well defined and agreed upon so the system can respond to a wide range of perturbations and changes; and the strength of commitment by members is such that emergencies will be met with additional effort. Open systems, then, are essentially self-regulating.

One corollary is that it is only within this framework that regulatory mechanisms, such as cost controls, can make an effective contribution. In creating these mechanisms it is essential to ensure that they do not run counter to, or undermine the requirement for self-regulation, and to remember that mechanisms which are appropriate in one phase of a system's existence may, with a change in location with respect to the mission, become inappropriate.³⁶

6. Finally, the requirement for a steady state can only be met if members are allowed a degree of autonomy and "selective interdependence," this

requirement that the coordination of components be maximally brought about by themselves . . . requires some sacrifice of autonomy and to that extent threatens commitment. This threat can be lessened by allowing selective interdependence."⁴⁰

The concept of time as a planning variable can also be traced to the early 1960s. Initially, the planning horizon was dichotomized using Fayol's model, into a short-term period, one year; and a long-term period, ten-years. This designation did not mean two different plans; rather, each year a new plan was developed for one year and ten years. Nor was there a different plan for each functional area of the firm; however, Fayol did permit the plan to be divided into several parts.

Unity of plan is an instance. Only one plan can be put into operation at a time; two different plans would mean duality, confusion, disorder. But a plan may be divided into several parts. In large concerns, there is found along side the general plan a technical, commercial, and a financial one or else an over-all one with a specific one for each department. But all these plans are linked, welded, so as to make up one only, and every modification brought to bear on any one of them is given expression in the whole plan. The guiding action of the plan must be continuous.⁴¹

In addition to the characteristics of planning offered by Fayol, futurity and integration, Koontz and O'Donnell suggest the characteristic, uncertainty. "It has sometimes been objected that planning in the face of great uncertainty is wasteful . . . But, just as the navigator must premise some kind of winds in order to make a start . . . the businessman must make his decisions against some

kind of assumption as to the future."⁴² Another characteristic is variety.⁴³ Plans take many forms: Objectives; Policies; Procedures; Budgets and Programs.⁴⁴

LeBreton and Henning organized these characteristics, and others into a comprehensive framework they called the dimensions of a plan. Their framework included: Complexity; Significance; Comprehensiveness; Time; Specificity; Completeness; Flexibility; Frequency; Confidential nature; Formality; Authorization; Ease of implementation, and Ease of control.⁴⁵ To fully appreciate the significance of each of these dimensions the authors' posited a principle of interrelations of dimensions.

. . . : All dimensions of a plan are interrelated and thus exert a combined influence on the planning process, the greater the ease of implementation, ease of control, specificity, frequency, authority, completeness,
the easier the obtaining of cooperation at all stages
the shorter the full period between authorization of a major project and its completion.

The greater the comprehensiveness, complexity, and significance,
the higher the level in the organization for approving the plan
the greater the need for exercising tight control and coordination
the greater the likelihood that the planner will use group or committee action rather than single action in carrying out the planning process.⁴⁶

A companion principle was also posited by LeBreton and Henning, primacy of dimensions.

. . . : When two or more dimensions occur with one or more relatively high and one or more relatively low on the intensity scale (complexity high-significance low, for example) one or more

dimensions will take priority over the other dimensions and thus exert the primary influence over the planning process. Primacy of a dimension is a function of the nature of the plan, the dimension itself, the intensity of the dimension, and the direction and intensity of other dimensions.⁴⁷

The purposes for presenting the concepts of LeBreton and Henning in some detail were two: first, they made a major contribution to management literature with the formulation of their theory of planning; second, the theoretical framework will be used, along with other planning concepts, in this dissertation. One of their recommendations for future research is particularly salient and contributed to an early definition of this study's research thrust: ". . . An empirical study to determine just where plans do originate in an enterprise."⁴⁸

By 1960, then, a planning literature had been established; the importance of planning as a management function was generally accepted; and the inventory of planning tools was growing, albeit slowly. The planning process was established, yet, not many organizations were prepared to use it effectively, some ignored it altogether.

Instrumentalist vs. Teleologist

The reluctance to implement "planning" by some educators was due, in part, to the misconception that it must include all of the dimensions listed by LeBreton and Henning. This reluctance, by many, also stemmed from the fear that it was costly, complicated and threatening. Further, educators were faced with a unique problem, growth.

Most were happy to "suffice" and saw little justification for "optimization," which they equated with planning. When planning was utilized it was frequently treated as an end, resulting in a formal document with all the specificity of a comprehensive budget, rather than a means, or process, which could tolerate a great deal less formality and specificity.

Salloway and Tack report the results of a two-part study of 33 large public educational institutions. They first surveyed the chief planning officers to determine the status of comprehensive planning as practiced at each institution and found it to be fragmented. In the second part of the study they used a delphi survey to determine what the same planning officers, "experts," would include as components in an "ideal" centralized comprehensive planning unit. The components nominated were: purpose; philosophy; function; organizational placement; staffing patterns; access to a campus computer system, and interface personnel assigned by each unit or sub unit to work with planning unit personnel to coordinate planning activities.

Because of the inherent need to plan, the establishment of a centralized comprehensive planning unit (to coordinate and facilitate academic, administrative, facilities, and financial planning at all levels within the institution) is paramount. Such an organizational component will enhance the institution's ability to create rather than inherit its future.⁴⁹

Lahr⁵⁰ reports the results of a study to: determine the long-range planning characteristics of a group of 20 private colleges and universities in Michigan; to compare the five colleges determined to have the most formal

approach to long-range planning with the five determined to evidence the least formality; and finally, to conduct an intensive examination of planning practices at six institutions. Several of his observations are of interest to this study.

He found the president to be heavily involved in planning, and concluded if the trend toward shorter presidential tenure is continued, a formal planning approach may help reduce the trauma of such transitions by involving more members of the staff, the board and faculty in the planning process.

Lahr cautions, however, that excessive formalization may be dangerous; "Formalization is excessive when planning no longer is an instrument to be used in the achievement of a purpose but rather becomes an end itself . . ." ⁵¹

The author also found that knowledge of long-range planning methods was limited and when such plans existed, they had not been implemented for a very long period. He found that only one of the twenty colleges studied had regularly conducted long-range planning prior to 1975. He also found that, "structure and process descriptors provide definitive characterizations of the extent of formalization of long-range planning at colleges and universities." This finding led to the recommendation that an instrument for taking an "inventory" of planning characteristics should be developed so that institutions and other interested agencies could make structure and process comparisons. ⁵²

The type of instrument Lahr had in mind may have been used in a study conducted by Boxx and Johnson,⁵³ which included 170 participating institutions, indentified from a randomly selected group of 400 academic institutions listed in the 1977-78 Educational Directory, Colleges and Universities. The purpose of the study was similar to Lahr's in that it too was interested in identifying levels of formality in planning.

A Formalized Planning Process Model was utilized which included eight sequentially oriented steps: Environmental Analysis; Assessment of Institutional Strengths and Limitations; Formulation of Assumption's; Development of Criteria; Development of Objectives and Goals; Development of Strategies for Attaining Objectives and Goals; Development of Long-Range and Short-Range Plans; and Evaluation of Performance.

Questionnaires were sent to the presidents of each institution; 220 responded and of those, 170 indicated formalized planning, as defined by the questionnaire, was in use at their institution. While the results were somewhat different than Lahr's, the authors', nevertheless, reached a conclusion which was remarkably close to his.

Even through 170 institutions reported the use of a formalized planning process, . . . many did not actually perform all of the steps in the process model . . . The findings of this study support the conclusion that many institutions are not engaged in a thorough and comprehensive type of planning. . . . Rarely was found the kind of detailed planning which would enable decision-makers to perform step-by-step what must be done to realize the goals of the institution and each of its subprograms.

The management of educational institutions should seek to apply all steps in the formalized planning process model.⁵⁴

Palola and Padgett⁵⁵ report the results of a study on institutional planning which approached the issue of how institutions plan from still another direction. The principal objective of this study was to assess how 80 public and private institutions performed long-range planning. A further purpose was to determine the impact on institutional effectiveness resulting from planning. To achieve this goal it was necessary ". . . to provide a framework within which certain problems of self-analysis and self-renewal can be resolved." The authors developed a model based on four principles: Program Development and Renewal; Planning as a Process; Responsibilities and Contingencies.

The data for the study was the by-product of another study conducted earlier by Palola, Lehmann, and Bliscke to identify how critical decisions made outside the institution affects its mission and role. The study covered 80 institutions located in California, Florida, Illinois and New York.

The types of institutions included state and private funded universities, colleges and community colleges. The principal research technique was the interview; however, documents and publications from each institution were also reviewed. Approximately five interviews were held at each institution with faculty, administrative and staff personnel who in one way or another were involved with planning.

From data gathered during the interviews each institution was evaluated on eight planning dimensions: Scope, ends/means; Integration, integrated/piecemeal; Priority, priorities/no priorities; Style, periodic/continuous; Research, research based/limited data; Participants, joint/separate structure; Structure, special/existing structure. The results of this analysis showed that, "Over 50 percent of the institutions were rated in a positive manner on only three of the dimensions." Even in those areas the performance was only marginal. Five key variables were found to be related to six of the dimensions: State (where located); Functional type (university, college, community college); Control (private, public); Character (new or old); and Size.⁵⁶

From the analysis of performance on the eight planning dimensions, three types of institutional planning were defined; and when the 80 institutions were distributed between the three planning categories, the resulting groups were approximately equal in size. The first planning type was substantive, which indicated that the institutional planning style was ends-oriented; integrated; established priorities; continuous; used a variety of sources; enjoyed wide faculty participation, and used a special or joint planning structure.

The second planning type was expedient, (according to the authors this type of planning had been stimulated by the development of statewide coordinating agencies) which

indicated the institutional planning style was means-oriented; piecemeal; failed to establish priorities; reflected little faculty participation and used existing or separate planning structures. The third planning type was mixed, and indicated the institution possessed both substantive and expedient characteristics.

The results of this study indicated that substantive institutions tended to be smaller in size; newer and more homogeneous; private; low student--faculty ratio; high percentage of students living on campus and interested in liberal arts; few faculty conflicts; small number of Ph.D.'s awarded and less faculty orientation to their discipline. These characteristics were interpreted by the authors' to produce an environment conducive to planning.

Taken together these factors probably help develop morale and commitment to the institution, and help simplify the definition of a single mission or set of priorities. These features also facilitate communication and interaction, and diminish the negative impact of bureaucracy and vested interest. . . . The institutions with Mixed planning seem to have the resources (or "Inputs") of Substantive schools but are hampered by their large size and age. . . . The Expedient institutions share the problem of Mixed schools and have the additional problem of a lack of money (i.e., about one-half the income per student).⁵⁷

The authors' suggested, as did Lahr that knowledge of an institution's planning style could be indicative of, or an indicator for, institutional behavior.

Master planning represents yet another planning concept. The master plan is a document (formal approach) which includes a philosophical statement concerning the

institution's mission, an assessment of its current status and an explanation of strategic changes which, when implemented during the planning period, will result in certain desired outcomes, goals. Master planning is referred to variously as long-range planning; self-study, and mission planning. Caruthers^{57a} adds that it is increasingly referred to as strategic planning. Yet, many authors would argue that the formality of master planning is not required, or is even to be avoided in strategic planning.

Master plans typically focus on the three to ten year segment of the planning horizon and, as might be expected, they are broad scoped, usually including the entire institution and reflecting a holistic planning perspective. Early versions of master plans developed in the 1970s, were criticized for frequently being out of date, more recent plans tend to be less specific, at least in terms of implementation, in an effort to overcome this complaint. Master plans may take as long as two years to complete; involve many participants; they are frequently costly, and are usually the responsibility of a master plan committee. According to Caruthers:

One of the more controversial topics in institutional planning has been master planning. Its proponents, largely from the systems approach school of management, see the master plan as the logical capstone of all planning activity--the grand design for all to follow. Its detractors, however, find that time spent on master planning all too frequently is wasted. Conditions often change to such an extent before the planning is half over that the master plan becomes obsolete.⁵⁸

Parekh provides a model for operationalizing the development of master or comprehensive plans. The model consists of six interrelated stages:

- .Mission: How the mission of the institution is defined
- .Goals: What the mission means in terms of quantitative goals
- .Responsibilities: What the goals mean in terms of organizational responsibilities
- .Activities: What the responsibilities mean in terms of daily, weekly, monthly, and annual activities
- .Budget: What the activities mean in terms of resource requirements
- .Evaluation:⁵⁹ What the actual results have been versus the plan

According to the author the stages do not have to be completed in any particular order, he advises the user to begin at a convenient or comfortable point; each of the stages, however, must be completed. To do this with as much attention to process as possible, the model contains a variety of multipurpose matrices related to each stage. Use of these forms may reduce the size of the plan. "This eliminates the need for ponderous planning documents running 300 to 500 pages in length, seldom read or digested in their entirety by anyone." In addition to reducing "verbiage" the matrices also increase specificity and quantification; they may be used to reflect the plan of the entire institution or an individual department.⁶⁰

Parekh's model, ostensibly, minimizes the need for environmental assumptions; however, he recognizes that most other planning models use them. His reason for this diminution of importance is that the development of

assumptions introduces so many uncertainties and restrictions, ". . . that planning dies before it begins." He asserts that while the model acknowledges external factors, it is based primarily on internal, action driven factors. In de-emphasizing these planning concepts, the author departs somewhat from the position of strategic planning advocates. He adds to this difference by observing:

Similarly, attempts to determine institutional standing, within a group of similar institutions, are helpful but by no means vital to the planning process. As a purposeful system, the planning process is useful to the extent that it can generate concerted action purely through its own volition and not merely in response to predetermined assumptions or comparisons.⁶¹

The fact that Parekh is frequently cited in the educational planning literature, without critical comment would indicate some agreement with his position. However, it has been demonstrated that planning by educational institutions has often been characterized as means oriented, driven by a need to quantify internal relationships and to focus on the planning process, risking a result (plan) which may be out of touch with the reality of the institution's environment. One of several anomalies contained in Parekh's model is the emphasis he places on evaluation, (stage six) and the disemphasis on organizational environment. Yet, in his chapter on evaluation he seemingly reverses his earlier position:

The institution must be continually on guard to ensure that its mission is valid in the present and future context of higher education and society.

Otherwise it might become functionally oriented to a purpose or mission that will no longer be valid.⁶²

Planning in education then has developed along several courses: one turned to operations research techniques, developed simulation models and experimented with planning, programming and budgeting systems; the other course was bifurcated. One group advocating formality, adhered to the planning theory which promulgated formal, comprehensive plans produced regularly by a planning staff; the other less formal group, used the same approach, sans the permanent staff and relied on ad hoc committees, producing formal plans at irregular intervals.

In other sectors, both public and private, these same forces were evident although less pervasive. Spurred on by that group of organizations put-off by excessive formality and rigid rules, a pragmatic approach to planning which offered a wider range of alternatives was being developed; requiring less formality and emphasizing flexibility it incorporated the concepts of those organization theorists which advocated greater cognizance of the external environment; these efforts would lead to the concept of strategic planning by the mid-1960s. While not specifically referring to strategic planning, Warren commenting on planning in general, and long-range planning in particular, observed:

It cannot be over-emphasized that with few exceptions the purpose of long-range planning is not nearly so much having a plan as developing process, attitudes, and perspectives which make planning possible. . . .⁶³

From 1960 to 1965, however, the literature is rich with interest in extending the general planning theories of LeBreton and Henning, Koontz and O'Donnell and others to applications areas such as long-range planning. George A. Steiner was a major contributor during this period.

Long-range planning has received widespread attention in recent years. More and more companies are creating more or less formal long-range planning programs. Many more are thinking about doing so. Yet there are also widespread expressions of vague doubt about the whole thing.

Both trends are understandable. On the one hand, many companies have properly recognized the need for integrating and formalizing long-range planning. On the other hand, the state of the art is still rather rudimentary. There exists no generally accepted concept of long-range planning or the methodology best suited to do it. There are many concepts and methods.⁶⁴

Long-range in 1963 was considered by the executives at one of Steiner's seminars to be about five years; they also expressed agreement on several other aspects of long-range planning: setting goals and objectives with strategies to achieve them; developing detailed programs to implement them; and finally, in a more philosophical tone, while doing these things to recognize the futurity of such decisions. The group referred to setting goals and establishing strategies as strategic planning; and developing detailed programs for implementing those strategies, as programming. The first year of the long-range plan was typically referred to by the group as the operating plan.

Strategic planning in 1963, however, was not much more than associating goals with strategies and conveying a

sense of futurity. When "strategic planning" occurred it was generally performed by managers who were following the debate between classic organization theorist and the more recently arrived but, nevertheless, important human relations advocates; both of which took a decidedly introspective view of the firm. The debate would expand to include organization ecologist and general system theorist over the following ten years, causing the term, strategic planning, to attract a variety of meanings and suggest even more applications--a fact that lead to misunderstanding and controversy. Kast and Rosenzweig sum the underlying planning problem as it existed in 1972, with their comment on contingency theory.

The general tenor of the contingency view is somewhere between simplistic, specific principles and complex, vague notions. It is a mid-range concept which recognizes the complexity involved in managing modern organizations but uses patterns of relationships and/or configurations of subsystems in order to facilitate improved practice. The art of management depends on a reasonable success rate for actions in a probabilistic environment. Our hope is that systems concepts and contingency views, while continually being refined by scientists/researchers/theorists, will also be more applicable.⁶⁶

Even though the environment was increasingly referred to in the planning literature of the early 1960s, the concept of boundary as it applied to organizations was not widely understood by planners, as suggested by two comments appearing in the literature, one nineteen years after the other. Boulding noted that the executive ". . . is a receiver of messages from the receptors of the

organization, and his job is to transform these messages into instructions or orders which go to the effectors."⁶⁷ The domains or boundries suggested by Boulding were apparently ignored or not accepted by some theorist, who Melcher⁶⁸ charged with concentrating on internal variables to explain complex organizational structures, behavior patterns, and effectiveness; the implication, of course, is they utilized a closed systems approach rather than the open-system advocated by others, including Melcher.

Negandhi also argued that until general systems concepts have been developed to a fuller extent researchers should utilize contingency theory--a mid-range approach--in order to benefit from systems concepts as they apply to the study of complex organizations. However, this required some adjustment:

The systems frame of reference enables one to think in terms of the interdependence and patterns of relationships. The mechanistic approach which stresses the determination of the causal link between two variables continues to be dominant in present studies of complex organizations. While the patterns of relationships and interdependence of various subsystems in the functioning of a total system are recognized by some scholars, few studies deal with interrelationships among variables. Even the contingency theorists, who ought to be examining interdependent patterns of relationships, are investigating simple causal relationships. Only the kinds of variables under investigation have changed, not the fundamental approach to scientific studies. . . .⁶⁹

Another debate which also had some impact on strategic planning occurred long before the ecologist came on the scene but it too centered on the anthropomorphic attributes of organizations. According to Steiner,

Anthony⁷⁰ and others, a major strategic planning activity is choosing organizational objectives and goals. Ansoff⁷⁷ states this position both succinctly and perspicuously with the observation ". . . the business firm does not have objectives which are different and distinct from individual objectives of the participants." Cyert and March⁷² in consonance with the "managerialists" point of view argued, "organizations do not have objectives, only people have objectives."

In addition to setting goals and choosing objectives, strategic planning also includes establishing policies, each of these activities have long-range implications; yet, strategic planning should not be confused, as it often is, with long-range planning. Nor should it be confused with operational planning, Moskow offers this insight:

The distinction between strategic and operational planning is sometimes blurred. In most cases, however, strategic planning is conducted at higher levels of management, includes a larger range of alternatives, covers a longer period of time, and includes a higher degree of uncertainty and more unstructured problems. In addition, strategic planning takes a corporate-wide perspective, while operational planning is done principally from a functional or suborganizational point of view.⁷³

It should also be observed that the strategic planning concept was not wholeheartedly supported by all scholars; even Ansoff acknowledges, "its actual application to practice has lagged."⁷⁴ He suggests Robert McNamara's efforts to install program, planning and budgeting systems,

PPBS, (an advanced version of the strategic planning system) were successful only because of the support of two Presidents and the force of McNamara's own personality. "As soon as Mr. McNamara departed, the pent-up enertia and resistance began to transform planning into the previous political, incremental process, which does not even vaguely resemble strategic planning."⁷⁵ Davous and Deas add:

We believe the term 'strategic planning' is a bad and misleading one; better to distinguish strategy analysis, planning, strategic decisions and strategic behavior, each of which is a distinguishable element.⁷⁶

Young summarizes several arguments against strategic planning. It is argued by some that for public institutions strategic planning has little merit because funding is determined by political rather than strategic factors. Others argue that higher education objectives are stable, unchanging even abstract or seen in a priori terms. Young rejects both positions; the first on the grounds that public institutions are increasingly being held accountable for their ability to meet the needs of their publics; and the second argument is countered with the admonition to use all available tools to keep the public support indicated by the a priori model.⁷⁷

Peter Drucker⁷⁸ wrote "Long-range planning does not deal with future decisions. It deals with the futurity of present decisions." The actions taken today by administrators and faculty will influence actions taken by and alternatives available to tomorrow's administrators and

faculty. In some cases those decisions will literally be made tomorrow by the same cast of actors making decisions today; on other matters, the futurity referred to by Drucker may be realized several decades later, serving or limiting an entirely different cast. The distinction between long-range and short-range planning is simply the period of time separating the initial decision point and the action point.

The distinction between planning processes, unfortunately, is not as simple as delineating Drucker's observation on futurity. Various typologies and dichotomies have been offered during the past twenty-five years on the nature of the planning process and its proper position in the organization. Today, the term strategic planning is used to connote futurity, as in long-range planning; formulation of important objectives by top management, such as, organization goals which may be short-range, as in the budget; and the organization's awareness of its external environment.

The concept of planning, as noted earlier, has been present in management literature since Frederick Taylor, and someone has claimed to have traced its roots as far back in literary history as Adam Smith's Wealth of Nations, published in 1776. It is generally agreed, however, that Henri Fayol set the pattern for its generic usage when he referred to it in a 1916 publication as one of five key management functions; planning, organizing, command, coordination and control. Several of these terms have been

updated but planning remains on almost every author's list as a legitimate management function. The attributes of planning Fayol described, "both to assess the future and make provision for it,"⁷⁹ have survived, even if his formal definition has since seen a variety of permutations: Budgeting; Short-range planning; Operations planning; Tactical planning; Long-range planning; Master planning; Comprehensive planning and other process oriented terms have been used to describe both planning process and function.

Anthony, in his seminal work elaborated and expanded the concepts of LeBreton and Henning. He accepted their notion of a plan having three characteristics: "First, it must involve the future. Second, it must involve action. Third, there is an element of personal or organizational identification or causation."⁸⁰ However, he argued, that the construction and dimensions of plans depended on their function. He differentiated strategic planning from management control and operations control.⁸¹

In 1965, Anthony undertook the task of sorting--out the usage of several planning terms which he believed were causing confusion. The resulting work is often cited in the literature and is considered by some to be the definitive statement on strategic planning. However, Anthony argued that, "Strategic planning, management control and operational control are internally oriented, that is they have to do with activities that occur inside an organization."⁸² He contrasted these terms with financial

accounting which he considered to be the organization's vehicle for reporting about the firm to the outside world.

Our objective is . . . to distinguish clearly between financial accounting and management control. The difference stems essentially from the fact that society has developed certain financial accounting principles to which all businesses are expected to adhere, whereas no such externally imposed principles govern management control information.⁸³

Anthony, of course, had an academic interest in financial and accounting theory, a fact which is easily discerned from his publications. What is less easy to determine is, did he anticipate the importance of the organizational environment, an attribute almost every author associates with strategic planning, or did he literally mean that strategic planning was oriented to activities that occur inside the organization? While this point may be unclear, Anthony was emphatic on another:

Since we shall emphasize differences, the reader may get the impression that we view strategic planning and management control as discrete entities. This is not so. The planning and control process is in fact a continuum, and we imply a discrete dichotomy only because we believe that this is the best way to explain the distinction. . . .

Management control is a process carried on within guidelines established by strategic planning. . . . Decisions about next year's budget, for example, are constrained within prescribed policies and guidelines . . . Although budgets are prepared within guidelines that emerge from the strategic planning process . . .⁸⁴

While Anthony considered strategic planning to subsume other planning activities such as budgeting, he did not, in contrast to comprehensive or master plan advocates,

believe it should include every planning aspect of the organization.

Ordinarily, the system that is used in the management control process is a total system in the sense that it embraces all aspects of the company's organization . . . The strategic planning process is much less likely to relate to the totality of the organization; rather, with rare exceptions, a given strategic plan relates to some parts of the organization, but not all of it.⁸⁵

Anthony suggested that the principles of strategic planning were based on economics and reflected a theory of the firm orientation; "whereas, the principles of management control have their roots in social psychology."⁸⁶ As the human relations and operations research prominence gave way to system theory and an ecological orientation, so did the concept of strategic planning become associated with external organization factors and flexibility in decision-making. Strategic planning and strategic management appear to be on converging courses to form a new management philosophy for coping in a turbulent environment. Drucker sagely observes:

One can have strategies for tomorrow that anticipate the areas in which the greatest changes are likely to occur, strategies that enable a business or public service institution to take advantage of the unforeseen and unforeseeable. Planning tries to optimize tomorrow the trends of today. Strategy aims to exploit the new and different opportunities of tomorrow.⁸⁷

Ansoff, on the other hand, believes that strategic planning can only address part of the strategic problem. His perspective of strategic planning is apparently diametrically opposed to Anthony's. He limits the strategic

planning focus to the problem of external linkages which he asserts stems from the view, "strengths of the firm will be emphasized and weaknesses minimized." Further, he does not believe, as does Anthony, that strategic planning and management control are parts of the same continuum. He asserts that strategic planning ". . . concerns itself primarily with problem-solving, determining the new preferred linkages with the environment under the assumption that implementation and control will follow as secondary activities." Ansoff advocates a form of strategic management which subsumes strategic planning.⁸⁸

Strategic Planning: A Framework

Many contemporary institutional planning scholars, such as Peterson,⁸⁹ refer to Anthony's model for analyzing planning and control systems when explaining strategic planning processes:

Strategic Planning is the process of deciding on objectives of the organization, on changes in these objectives, on the resources used to attain these objectives, and on the policies that are to govern the acquisition, use, and disposition of these resources.

Management Control is the process by which managers assure that resources are obtained and used effectively and efficiently in the accomplishment of the organization's objectives.

Operational Control is the process of assuring that specific tasks are carried out effectively and efficiently.⁹⁰

As noted earlier, Anthony did not mean that each of these processes are discrete entities. Rather, he considered them to be integral parts of a framework which could be described

as a continuum, where on one end is found the pure planning function, strategic planning; midway is found the combination planning and execution function, management control; and at the opposite end the focus is on execution, operations control.

Anthony also makes a distinction between long-range planning and strategic planning which extended the planning theory of LeBreton and Henning and also made clear that the two concepts were not interchangeable.

Strategic planning does not correspond to what some call long-range planning . . .

The long-range, short-range distinction has more validity in relation to the duration of the consequences of decisions. Strategic decisions tend to have long-term effects; often they are irreversible in the short run.⁹¹

Recalling Drucker's comment, "Long-range planning does not deal with future decisions. It deals with the futurity of present decisions."⁹² The difference, then, between long-range planning and strategic planning is that one is time sensitive, and the other adds to time, level and scope dimensions. Strategic planning is usually carried out at relatively high management levels and deals with issues which are critical to a relatively large segment of the organization.

Scott, offers this definition of planning which elaborates on a theme expressed by LeBreton and Henning and one Scott attributes to the work of Fayol.

Planning is an analytical process which encompasses an assessment of the future, the determination of desired objectives in the context of that future,

the development of alternative courses of action to achieve such objectives, and the selection of a course (or courses) of action from among these alternatives.⁹³

This definition implies a certain dynamic toward improvement; further, it implies acceptance, not just because it represents a good plan technically, but that it is also "practical and intelligent."⁹⁴

Scott's planning model provides an interesting typology of plans and somewhat different from Anthony's, it is task oriented. First, goals are plans in the sense they describe in operational terms, the mission of the organization; second, policies are plans, strategic, intended to provide guidelines for those responsible for actions, at all levels, necessary to accomplish the higher level plan, goals; third, budgets reflect the resources and their allocation necessary to achieve certain results in a future period; and finally, procedures are plans, instructions, for accomplishing higher level plans: Budgets, policies and goals.⁹⁵ The key variables in plans are:

1. Subject area. This variable is a low-level abstraction: Plans are simply described in the terms of observable specifications. . . .

2. Scope. This second variable is a more complex abstraction: Plans are distinguished according to differing ranges of influence and differing amounts of detail.

3. Time. The third variable, time, may be classified specifically (a one-year or a five-year plan) or vaguely (a short-range or a long-range plan). This is the variable by which 'long-range' planning is distinguished from other forms of planning, . . .⁹⁶

The planning variable time is used to describe a variety of relationships, both systemic and strategic. Each organization engaged in planning is concerned with the planning cycle, the frequency with which various types of plans are reviewed, revised or even discarded; and preparation time, the gathering of information concerning a variety of questions such as, "how long will it take--how long will planning resources be committed?" Organizations are also concerned, once the plan is agreed to, with the implementation lead time. A third, and perhaps the most concrete of the questions regarding time is, "how long will a given activity in the plan continue to influence operations, impact time?" At the other extreme, the least concrete, epochal time, is the basis for many fundamental planning questions such as, "how long will this trend last?"

Other planning models developed about the same time and reflecting similar characteristics, especially the concept of continuous as opposed to discrete planning processes, included: George Steiner's model; The SRI conceptual model, and The Gilmore-Brandenberg model. The principal differences were terminology and the grouping or distribution of planning activities within the several categories along the imaginary planning continuum.⁹⁸ All concurred, however, that strategic planning belonged at one extreme end of the continuum and the most detailed form of planning, what ever label, belonged at the opposite end. Steiner listed the following characteristics, which he and

others used to differentiate strategic planning and tactical planning.

1. Level of Conduct. Strategic planning is conducted at the highest levels of management . . .

2. Regularity. Strategic planning is both continuous and irregular . . .

3. Subjective values. Strategic planning is more heavily weighted with subjective values of managers . . .

4. Range of alternatives . The total possible range of alternatives from which a management must choose is far greater, by definition, in strategic . . . planning . . .

5. Uncertainty. . . . uncertainty is usually much greater in strategic planning . . .

6. Nature of problems. Strategic planning problems are unstructured and tend to be one of a kind.

7. Information needs. Strategic planning requires large amounts of information derived from, and relating to, areas of knowledge outside the corporation . . .

8. Time horizons. Strategic planning usually covers a long time spectrum but sometimes is very short, and varies from subject to subject.

9. Completeness. Strategic planning conceptually covers the entire scope of an organization.

10. Reference. Strategic planning is original in the sense that it is the source or origin for all other planning in an enterprise.

11. Detail. Strategic plans are usually broad and have many fewer details . . . The further out in time the strategic plans stretch, the fewer still are the details.

12. Type of personnel mostly involved. Strategic planning for the most part is done only by top management and its staff. Included in the concept of staff here would be line managers when acting as staff.

13. Ease of evaluation. It is usually considerably easier to measure the effectiveness and efficiency of . . . plans than of strategic plans.

14. Development of objectives, policies, and strategies. The objectives, policies, and strategies developed in strategic planning are new and generally debatable.

15. Point of view. Strategic planning is done from a corporate point of view, whereas . . . planning is done principally from a functional point of view.⁹⁹

Peterson has suggested a somewhat different continuum; yet, useful for describing planning style. Peterson's typology includes six models: Formal-Rational, the most complete and widely recognized; Organizational Development, its focus is understanding the organization, and planning is considered a group learning activity; Technocratic/Empirical, emphasizes planning techniques; Philosophical Synthesis, stresses logic first, then analysis; Political Advocacy, pragmatic, focus is on adaptation and recognizes boundary spanning roles; and Coordinated Anarchy, pluralistic, recognizes need for autonomous units within the organization structure.¹⁰⁰

The formal-rational model, according to Peterson is the most complete and also the most preferred by colleges and universities; the least rational is coordinated anarchy. The author acknowledges that pure usage of any model is unlikely; rather, some combination will emerge in most cases as the dominant model.

This dominant model stands a better chance of success if it takes as its basic planning focus an organizing assumption that reflects the basic

tradition of the institution; if the planning orientation, purpose, and content reflect the real planning issues facing the institution; and if the dynamics of planning and participation reflect the governance process and administrative style of the institution. . . .¹⁰¹

Combining the concepts of Steiner's process continuum, which describes levels of planning focus and detail with Peterson's rationality continuum, which describes a range of planning styles from traditional to nontraditional, provides a convenient vehicle for summarizing the review to this point and establishes a base for the discussion that follows. To know something about the way an organization plans is to know a great deal about the organization itself. Over the last two decades, planning has evolved both as a process and as a function, from a rigid structure with well defined processes, leading to the publication of a document; to a flexible, pragmatic administrative philosophy which views planning more as a tool than a function.

Institutional master planning will vary, depending on whether a more rational (or O.D. or technocratic/empirical) or less rational (philosophical synthesis, political advocacy, or controlled anarchy) process model is assumed. The more rational will tend to make greater use of top down, centralized, or highly coordinated and analytically oriented processes with more organized participation.¹⁰²

As noted earlier, master planning and strategic planning are often considered synonymous in at least three areas: environment assessment; institutional assessment; and values assessment. Peterson would add a fourth area, master plan creation.¹⁰³ This final point, however, is the source

of considerable controversy; what is meant by "the master plan?" If it is comprehensive and formal then many would agree, in the tradition of Steiner, that it is not a strategic plan, for such plans must deal only with the few critical issues facing the organization and they must be dynamic, continuously monitoring those select issues, ready to shift emphasis, dropping and adding new concerns as needed. Peterson would seem to be congruent with the latter position, viewing the creation of the master plan as the process of consolidating the information gathered in the first three activities into a cohesive pattern or design which emphasizes strategy.

Strategic planning then seeks to establish the fundamental assumptions about the environment, the institution, and the future form of the institution. It involves policy decisions, which are the broadest and most encompassing decisions concerned with a college's or a university's long-term future. . . . These decisions may or may not reside in a single master planning document. Strategic planning then deals with the organization-environment interface and is intended to provide a framework within which tactical planning occurs.

This, the first section of the review of literature focused on the planning process and more will be reported on this aspect of planning in the final section; but first, it is necessary to understand something about the context in which the planning process functions. The following section will deal with the organization, its structure and its mission, the third section will describe the external environment in contextual terms and its strategic planning implications. The final section, dealing with strategy and

policy, the product of strategic planning, provides closure for the review of planning literature.

The Planning Context: Organization

The conceptual framework for this section of the review of literature relies on the systems concept of input-output analysis and cybernetics. The term input-output is used here in the Parsonian sense of exchanges occurring across organizational boundaries as expressed in the several concepts, constructs and processes used to describe policy-making. The term cybernetics is used in the Boulding sense of flows of information which describe the symbolic medium of those exchanges required to effect policy implementation.

The organization is a useful unit of analysis for the purposes of this study; yet, one must remain cognizant in attempting a synthesis of the literature that, "Organizations are complex social phenomena. This complexity is reflected in the eclectic nature of organization theory, the diversity of scientific research in the field, and the myriad of organization designs in the modern world . . ."105

The analytical variables this study is concerned with are: mission, including role and scope; policies or strategies, for allocating resources to achieve mission; and performance, the use of efficiency and effectiveness measures to revise policy or mission or both when necessary to ensure continued access to resources. The organization then is viewed as a "tool" in the Perrow sense for managing these variables.

Typology

Ackoff¹⁰⁶ has proposed an organizational typology based on structure which serves as a convenient starting point and provides a framework for analyzing the first of two key elements in policy formulation, resource allocation. The concepts of geneity and nodality are utilized. Geneity relates a part or element to the whole or system. The dichotomy employed by Ackoff's typology is homogeneity-heterogeneity. Homogeneous organizations are characterized by the locus of control residing in the power structure of the organization. Heterogenous organizations, on the other hand, are characterized by the locus of control residing in the general membership and serves, nominally, some limited purpose each member strongly identifies with.

According to Ackoff, homogeneous organizations use members as instruments, rely on a functional division of labor and, in terms of member behavior, are variety decreasing. Heterogeneous organizations are instruments of their members and through such coalitions expand member opportunities and thus can be considered variety increasing, in terms of member behavior.

Nodality describes the distribution of authority. Uninodal organizations are hierarchically structured with decision-making authority always found on the next highest level, so that ultimately one decision-maker is responsible for what the organization does. Multinodal organizations require agreement between two or more relatively autonomous decision-makers.

Postsecondary education institutions could fit this typology in a variety of combinations ranging from the university viewed as multinodal-heterogeneous, to a proprietary vocational institution having the characteristics of a uninodal-homogeneous organization.

The second element in policy formulation is resource generation. Vickers has suggested the following typology: user-supported; public-supported; member and/or donor-supported; and endowment-supported institutions.

Another typology is based on organization function. Katz and Kahn describe four types of organizations in terms of geno-typic function: economic, maintenance, adaptive and managerial-political. According to Katz and Kahn:

To ensure some viable integration or compromise among organized groups and interest publics there must be an authoritative decision-making structure for the allocation of resources.¹⁰⁷

This is accomplished through a variety of productive activities which provide basic goods and services. Further, a central set of norms and values must exist with socializing agencies capable of promoting belief systems and provide training for social roles.

The typology offered by Katz and Kahn is similar to one found in Parson's¹⁰⁸ theory of action. In his expansive "model" Parsons describes or differentiates organizational types based on the needs or context of larger sub-systems or systems in which they function: adaptation, goal attainment, integration, or pattern-maintenance.

The literature provides other organization typologies based on function: socio-technical and socio-psychological distinction made by the Tavistock group; the criterion of cui-bono?, for whose benefit, developed by Blau and Scott. Additional typologies consider organizational technology, Thompson; regulation, Etzioni; and total institutions, Goffman.

The formal organization as the unit of analysis was selected for this study over a superordinate perspective, using a Parsonian like framework with the argument that the level of abstraction was too great for proper analysis of the role of planning in the decision-making process; yet, Parsonian influence will be apparent, reflecting the eclecticism found in the literature, as noted earlier by Kast and Rosenzweig. At the other extreme, the particularistic views of organizational humanists such as Bennis, find individual and dyadic relationships useful in explicating organizational behavior. Concepts from this "school" of organizational thought will also be included, reinforcing the viability of a pragmatic approach to planning, but the organization remains the unit of analysis. The concept of planning, as will be seen, transcends the theories of organization, from Weber to Boulding and Ackoff to Zald.

Goals

The issue of purposefulness, of course, is central to this study, and one which is troublesome when applied to

organizational goals.¹⁰⁹ Fortunately, Thompson offers a convenient way to handle the problem; he makes the distinction between goals of and goals for an organization. Goals for may be held by individuals and/or collectivities in the organization's environment who wish to influence its scope and mission. Goals of the organization reflect "future domains" held important by members of the power structure or dominant coalition within the organization.¹¹⁰

Romney reporting on a study which covered 1150 faculty, administrators and trustees at 45 American colleges and universities asserted: "analysis of the responses indicates that faculty, administrators and trustees largely agree on what their institutions' goals should be."

Romney observes "the apparent existence of a broad, albeit tacit, consensus with respect to these matters among the three principal control groups on campus has large implications for at least two issues of insistent import in higher education--accountability and productivity." His study describes goals of the institutions surveyed.

The problem of goals for those institutions having a different thrust or direction did not go unnoticed by Romney. "Much, if not all, of the effort devoted by a college or university to the attainment of high purposes is bound to be questioned by funders who either do not appreciate the worth of the stated goals or, while admitting their worth, do not see that they are being attained."¹¹¹

Romney's research findings which indicated agreement on goals between the "three principal control groups" and a shared view of skepticism "about the value of the measures of productivity most widely used . . ." ¹¹², reflect a problem which he attributes to misapplied or inadequate information. This is, in part, a defense for the goals of the organization against the goal for the organization. He seems to suggest that congruence between conflicting goals of and for the institution is really only a matter of defining productivity.

Anthony and Dearden posit that "the goal of a nonprofit organization is not to widen the difference between outputs and inputs. Rather, its goal is to render as much service as is possible with a given amount of resource . . ." ¹¹³ The emphasis here appears to be on the qualitative rather than the quantitative aspect of the input/out relationship.

Romney also indicates that productivity is the ratio of value (subjective) produced, to the value of resources consumed which will usually be measured by "funders" in monetary (objective) terms. What other "value" system will funders, clients, and publics use? Parsons offers exchange media such as general commitment, influence, and power as well as pecuniary value systems. ¹¹⁴ Romney adds, "Clearly, productivity involves not only efficiency but effectiveness: low unit cost is of no avail if the unit has no appreciable quality." ¹¹⁵ The problem of effectiveness and efficiency

will be covered in more detail later under the topics of output measurement and performance.

Continuing with the goals of organizations, however, and not withstanding Romney's findings, Katz and Kahn voice concern with a different view. "Nor is there always agreement about the mission of the organization among its leaders and members."¹¹⁶ Further, there may be little congruence between stated goals and activities. These writers would use open-systems theory to monitor the goals of organizations.

Pfeffer and Salancik suggest a similar concern while discussing organizational legitimacy, they observe, "organizations may themselves seek to establish their status in society by generating statements of their goals which in the current environment would be found to be acceptable by the relevant public's. When values change, organizations alter and restate their goals to give the appearance of supporting new ideas."¹¹⁷ Thus, by monitoring the larger social system's value shifts vis-a-vis its own values, the organization may continue to enjoy the support of that system by simply repackaging its goals, rather than changing them; or restructure its goals to accommodate new environments to reduce dependence on old or existing environments.¹¹⁸

The problem of futurity has not gone unnoticed in the goal related literature, Steiner takes a position similar to that of the human relations school of

organizational thought when he lists five reasons for short-range goals:

First, they make long-range objectives meaningful. Without a direct linkage between long-range objectives and short-range plans the objectives may become idealistic and impracticable. . . .

Second, short-range goals provide benchmarks for measuring progress towards long-range objectives. All managers can see how step-by-step achievement of short-range targets can lead to achieving ultimate purposes.

Third, they provide a basis for managerial performance appraisal. . . .

Fourth, short-range goals should have motivating power

Fifth, if the planning process is conducted with substantial participation by all concerned, the setting of short-range goals should improve subordinate-superior managerial relationships. . . .¹¹⁹

Thompson writes of domains which the institution stakes out or claims as a strategy for goal attainment.

"Thus universities are universities, but their students housing and graduate education, others do not."¹²⁰
 populations, others are international; some offer students housing and graduate education, others do not."¹²⁰

Some authors view goals as decision constraints. Harvey and Mills in a chapter titled "Patterns of Organizational Adaptation: A Political Perspective," deal with the concept of issue-perception and formulation of goals. They state, "'issue-perception' refers to identification in terms of some kind of cognitive structure of an event or pattern of events that in some way demands an organizational response, 'goal-formation' is simply the

process of delimiting and giving direction to the response."¹²¹

This view of organizational goals relates to decision-making; however, the literature is rich in other goal types as well. Connor provides a partial list of goal types which the following authors claim organizations pursue: Parsons, Etzioni, Cyert and March, B. Gross, Katz and Kahn, E. Gross and Perrow.¹²²

According to Connor a useful way of thinking about organizational goals is:

Organizational goals represent a future state toward which all or part of the organization is striving. This striving is reflected in activities of members and the utilization of organization resources.¹²³

Schutzenberger provides yet another approach to considering goals by suggesting a framework for analyzing goal-seeking behavior. He offers the concepts of "span of foresight" and "degree of flexibility." To these concepts he adds a scale of strategies and tactics.

. . . it will be seen that any goal-seeking behavior may be classified on a scale of strategies and tactics, each one depending on a general function representing some measure of the distance between the present position and the goal. . . . so we have many tactics, each depending on a single function. The complete specification and full classification, are given when to this function we add the "span of foresight" and the "degree of flexibility." The latter being conveniently measured by the minimal time at which the provisional goal may be replaced by another.¹²⁴

Consider the planning horizon for a given problem to be equal to the "span of foresight." The solution for attaining the goal is the strategy. Schutzenberger would

divide the planning horizon, "span of foresight" into increments. Similarly, he would design a strategy for achieving the goal. In turn the strategy would be composed of discrete actions, tactics. These tactics and the time increments would be scheduled to coincide. At the completion of tactic "1" in the first increment of time, progress toward the goal would be evaluated. If optimal, by definition, performance has not been achieved then the strategy would be reevaluated and either the entire strategy or certain of the tactics would be changed, "degree of flexibility." This process would be repeated until the goal was achieved, changed or considered no longer worth pursuing.

If now we apply the theory of inductive behavior as defined by Wald on the Ville-von Neumann principles, we find that the optimal strategy is just the simple tactic of attempting to do one's best on a purely local basis.¹²⁵

A final consideration of goals to be considered here is the seminal work done by Simon where he introduces the proposition that organisms adapt well enough to "satisfice" but do not, in general, "optimize." In other words, in an organizational setting the individual will select the first satisfactory solution advanced rather than search for one which is optimum. This concept is also congruent with one which views goals as constraints.¹²⁶

Ackoff has proposed that a need exists for a planning methodology which utilizes quantitative optimization in every case where permitted, and satisficing

only when necessary. He claims such a process would yield results superior to either satisficing or optimizing when used alone and labels this pragmatic approach, adaptivising.

This type of planning is sometimes referred to as innovative planning. It is not prevalent today . . . Therefore it is more an aspiration than a realization.

Adaptive planning has three main planks in its platform:

1. . . . effective planning cannot be done to or for an organization; it must be done by the responsible managers

2. . . . the principal objective of planning should be to design an organization and a system for managing it that will minimize the future need for retrospective planning--that is, planning directed toward removing deficiencies produced by past decisions--. . .

3. Our knowledge of the future can be classified into three types: certainty, uncertainty, and ignorance; each requires a different kind of planning: commitment, contingency, and responsiveness¹²⁷

According to Perrow, the Simon model of organizations, insofar as goals are concerned, is hierarchically oriented. "First, we learn that goals are set by the leaders and then broken down into subgoals at each level of the organization . . ."¹²⁸ These subgoals may also be termed objectives. Caruthers and Lott offer this definition: Objectives are specific ends to be achieved with regard to a particular goal."¹²⁹ Romney and Bogen define "a goal as a set of circumstances sought in pursuit of the mission."¹³⁰

Mission

A mission according to Caruthers and Lott "is a broad statement of fundamental purposes; it embraces the social and intellectual aspirations of the institutions." They also offer useful definitions for the terms role and scope:

An institution's role as stipulated in the mission statement, differentiates it from many other colleges and universities, especially in terms of current program activity . . . an institution's scope specifies its current boundaries or range of activities . . .

Terms such as mission, role and scope according to Caruthers and Lott "describe the static identity of a college--that is, its philosophy, clientele, and services--and how it may differ from other institutions."¹³¹

Contrasted to this "static identity" are terms such as goals and objectives which connote action(s) taken or planned by the institution in order to move closer to the desired mission; which, in turn, would require more substantive, and therefore less frequent change, than role; and scope, representing the most dynamic area, is subject to constant "fine tuning."

Goals and objectives are evidence of planned change. As noted above these goals and subgoals or objectives may be of the organization and/or for the organization. If the goal(s) relate to mission the change(s) will be substantial; if the goal(s) relates to role or scope its impact on the institution as a whole will be less but could be substantial at the unit level.

It follows then that where change is in evidence, current performance is less than desired by the sponsor(s) of the goals(s) and objective(s). The operational state of the goals and objectives may be determined by the actions for or of the institution and the amount of resources allocated.

Performance

The terms most often found in the literature describing performance evaluation are efficiency and effectiveness. Zammuto reporting on the findings of Campbell et al. who had conducted a comprehensive review of the literature on organizational effectiveness states: "First, the authors found that over twenty-five types of variables had been used as measures of effectiveness . . . The authors concluded:"¹³²

Organizational effectiveness as it has been defined and measured in the literature is an extremely untidy construct. When twenty-five separate variables can be identified (as proxies for effectiveness) and most of these variables have several different operational forms, life becomes rather difficult.¹³³

Pfeffer and Salancik distinguish between effectiveness and efficiency as follows:

The difference between the two concepts is at the heart of the external versus internal perspective on organizations. Organizational effectiveness is an external standard of how well an organization is meeting the demands of the various groups and organizations that are concerned with its activities. . . .

The effectiveness of an organization is a socio-political question. . . . it reflects both an assessment of the usefulness of what is being done

and of the resources that are being consumed by the organization.

Organizational efficiency is an internal standard of performance. The question whether what is being done should be done is not posed, but only how well is it being done. Efficiency is measured by the ratio of resources utilized to output produced. Efficiency is relatively value free and independent of the particular criteria used to evaluate input and output. Because efficiency involves doing better what the organization is currently doing, external pressures on the organization are often defined internally as requests for greater efficiency. . . .¹³⁴

Cameron differentiates program effectiveness and organizational effectiveness.

Program effectiveness, refers to success in performing a program--a specific set of behaviors, tasks, and purposes defined by the designers or initiators of the program. Most organizations, however, comprise multiple, contradictory, and often ambiguously specified programs, which are defined by a broad array of constituencies. Therefore, adopting a single indicator of organizational effectiveness--such as profit--may serve to measure success in one program but does not address the other multiple programs operating simultaneously in the organization.¹³⁵

Cameron also acknowledge that organizational effectiveness and efficiency are often confused and indicates that organizational efficiency is usually defined as the ratio of organizational inputs to outputs and asserts that little controversy exists either about the definition or how to measure efficiency. However, he does not join with Pfeffer and Salancik in limiting efficiency to an internal standard of performance role.¹³⁶

While it is clear that something less than unanimity exists concerning organizational efficiency, the differences between researchers are relatively trivial compared to the

treatments proposed for describing and measuring organizational effectiveness. These subtleties concerning the meaning of efficiency are relatively unimportant to this study, compared to the problems associated with describing the characteristics and properties of effectiveness; therefore, it seems reasonable to concentrate on the latter; although, both must ultimately be dealt with in any strategic planning model.

Zammuto, benefiting from Campbell, Cameron and other researchers advances the following:

Thus, the process of evaluating can be reduced into three conditions necessary for an attribution of effectiveness: (1) an effect is desirable (element of value); (2) the effect is observed or reliably predicted (element of fact); and (3) the desirable effect is perceived as having been produced by the activity being evaluated (element of fact).¹³⁷

The author asserts that all three of these conditions must be met before a judgment of effectiveness can be rendered. "In other words, value underlies fact in evaluative judgments. An effect must be desirable, observed, or predicted, and be perceived as being produced by the activity being evaluated before it will be judged effective."¹³⁸

The literature provides several types of models for considering the value aspect of effectiveness: goal models; system models; process models, and multiple constituency models are identified by Cameron.¹³⁹ Zammuto's¹⁴⁰ analysis is not quite as discriminating, he argues that the goal-based and systems models are logical extensions of each

other. He agrees that the multiple constituency model is unique in its treatment of information, recognizing the possibility of conflicting sources for evaluative data; he also views this model as integrating the goal and system model approaches. He makes no mention of the process model Cameron attributes to Likert. While our interest for this study is limited to multiple constituency models, a brief description of each type will help explain why one is more useful here than the others.

The first type, goal-based, is often associated with Etzioni¹⁴¹ and links effectiveness to achieving organization goals. Outputs of the organization are compared to its goals and the relationship yields a level of effectiveness. This model is most useful when organization goals are clear, consensual, and measurable. The problem with this model is that an organization can be ineffective even when it accomplishes its goals, if the goals are set too low compared with the expectations of its publics.

The second type, system-resource model, is often associated with Yachtman and Seashore.¹⁴² Organizations are viewed as being goal-free and effectiveness is measured by their success in acquiring resources necessary for system maintenance.

This model is useful when the relationship between the products (outputs) of the organization are easily linked to the resources it acquires (inputs). Effectiveness is measured by the "fit" both in terms of quantity and quality.

The greatest problem with this model is that its application is quite limited.

The third type, internal process, relates to organizational health or internal climate. Organizations characterized by smooth internal functioning, relatively stress free and generally in good "health" are more effective than organizations which possess a smaller degree of these characteristics.¹⁴³ This model is most useful when the internal processes of the organization are closely related to its products or services (output). Application of this model is most likely to cause confusion between the terms efficiency (organizations which produce little waste) and effectiveness. Unfortunately organizations with slack (unused resources) are often effective.

The fourth type, multiple or strategic constituencies, is the newest model¹⁴⁴ and the least referred to in the literature. Nevertheless, in turbulent environments where organization networks or organization sets are relatively tightly coupled it can be useful in explaining effectiveness. This model considers the extent to which the organization's "strategic" constituents are kept minimally satisfied. These relationships are dynamic and the ability to maintain some near optimum mix of influence and satisfaction determines the organization's effectiveness. The model loses its viability in more placid and loosely coupled environments.

The presence of four models explaining organizational effectiveness instead of one or two is an indication of the enigmatic nature of the concept. Cameron claims organizations can be ". . . both effective and ineffective at the same time depending on the aspect of the organization being considered,"¹⁴⁵ and the evaluators perspective. Zammuto refers to differences arising from the public's expectation and the institution's actual performance as a "social anxiety factor."¹⁴⁶ He explains these differences as changes which reflect qualitative shifts in public preferences for products or services other than those being offered by the institution, while quantitative preferences remain relatively stable; or the demand for more of the same products or services, which is evidenced by qualitative preferences remaining stable while quantitative preferences increase.

In an effort to make statements regarding effectiveness more meaningful to the focal organization and research studies more comparable across different organizations, Cameron suggests ". . . that certain critical decisions must be made that limit assessments of effectiveness to a specific organizational referent."¹⁴⁷ This framework for guiding evaluation should specify six attributes.

1. What domain of activity is the focus of the evaluation?¹⁴⁸

Cameron¹⁴⁹ describes a study he conducted to identify empirically the major domains that typify colleges

and universities and to assess levels of effectiveness in each of those domains. The study identified relevant characteristics of institutions for four domains to explain the differences in effectiveness among institutions of higher education:

1. External adaptation. This domain includes student development, system openness and community interaction. These two dimensions reflect the institution's success in transactions with its external environment.
2. Morale. This domain includes student educational satisfaction, faculty and administrator employment satisfaction, and organizational health. These dimensions reflect the institution's success in dealing with its internal environment or organizational climate.
3. Academic-oriented. This domain includes student academic development, quality of the faculty, and ability to acquire resources. Cameron does not link this domain explicitly with the external environment and the data as presented would make it impossible for the reader to do so; however, to the extent the institution must rely on external sources for necessary resources the institution's interactions with those sources would be critical and success would be indicative of effectiveness.

4. Extracurricular. This domain includes student personal development. This dimension reflects personal, non-academic development.

In addition to describing the four domains by analyzing the nine effectiveness dimensions noted, Cameron also found that the forty-one (41) institutions studied were distributed over four groupings which he labeled as follows: the Scholarly-high morale group included five (5) institutions; the Scholarly-medium morale group included four (4) institutions; the Externally oriented group included eight (8) institutions, and the Mediocre group included twenty-four (24) institutions.

The five (5) institutions in the scholarly-high morale group rated well in the academic and morale domains but ineffective in the external adaptation domain. The eight (8) institutions in the externally oriented group were ineffective in all domains except the external adaptation domain. The twenty-four (24) institutions in the mediocre group scored below average in effectiveness in all domains. Finally, the four (4) institutions in the scholarly-medium morale group excelled in the academic domain, was average in the morale domain and were ineffective in the external adaptation domain.

Each of these groups was found by Cameron¹⁵⁰ to possess a unique set of institutional characteristics:

<u>Institutional Group</u>	<u>Major Distinguishing Characteristics</u>
Scholarly-high morale group	<u>Affluent, Academic Institutions</u> <u>Charges high tuition</u> High endowment revenue High endowment value High state revenue for research High expenditures for academic support Offers liberal arts programs
Scholarly-medium morale group	<u>Affluent, Professional Institutions</u> <u>Charges high tuition</u> High endowment revenue High endowment value High state revenue for research Goal of faculty development High total expenditures Offers professional programs
Externally-oriented group	<u>Developing, Professional Institutions</u> High endowment value Emphasis on fund raising Goal of faculty development Growing enrollments High total expenditures Offers professional programs
Mediocre group	<u>Developing, Teaching Institutions</u> <u>High emphasis on fund raising</u> Goal of faculty development Growing enrollments Offers teacher training programs

In Summarizing the results of his study, Cameron offered the following propositions:

1. Organizational effectiveness is a multidomain construct
2. When organizational effectiveness is viewed as a multidomain construct, relationships among other organizational variables are altered
3. Organizational effectiveness in external domains may mitigate against effectiveness in internal domains¹⁵¹

These propositions suggest that prestige ratings may actually indicate high effectiveness in external relations but low levels of academic effectiveness.¹⁵²

The second critical choice to be specified in assessments of effectiveness:

2. Whose perspective, or which constituency's point of view is being considered?¹⁵³

Cameron notes that one way to evaluate organizational effectiveness is to select indicants which reflect the interests of a variety of constituencies from multiple domains. Social indicators may provide information to institutions which could be useful in developing strategies for dealing with various interest groups. This area will be reviewed in the following section which considers environment factors in more detail.

A third critical choice which should be included in effectiveness studies is:

- 3) What level of analysis is being used?¹⁵⁴

If an individual is the focus of analysis this should be stated; likewise, if the level of aggregation is the group, sub-unit, unit or overall organization it must be described and if comparisons are made or if ratios are used the methodology must be clearly compatible with the purpose of the study. Further, as noted by Cameron and Whetten,¹⁵⁵ the development stage of the organization is equally important in that a level of analysis may be appropriate at one stage of development and not at some other stage.

The concept of organizational life cycles is key to the fourth critical area to be specified by researchers engaged in effectiveness studies.¹⁵⁶

- 4) What time frame is being employed?

Two concerns are raised by this question: the issue of futurity, a short term opportunity being taken or turned down because of longer term considerations; and the evolving relationships of constituencies to organizational development over time. Cameron notes "The choice of time frame is important because organizations may trade off short-term effectiveness in order to guarantee long-term effectiveness."¹⁵⁷

A fifth choice which evaluators must specify when assessing organizational effectiveness is:

- 5) What data are to be used in the evaluation?¹⁵⁸

Cameron dichotomizes the data choice as one between objective data (organizational records) and subjective, perceptual data (interviews or questionnaires). Another data source not mentioned by Cameron is public data or data supplied by one or more of the institution's constituencies. Cameron notes "the selection of data by which to measure effectiveness is important because an organization may be judged effective on the basis of subjective perceptions while objective data may indicate that the organization is ineffective."¹⁵⁹

- 6) What referent is being employed in the evaluation?¹⁶⁰

A variety of referents may be selected once the indicator(s) for evaluating effectiveness has been selected, alternatives include: comparative evaluation; normative evaluation; goal-centered evaluation; improvement evaluation and trait evaluation. Knowing which referent(s) was used helps users of research studies whether they are interested in improving effectiveness as practitioners or fellow researchers interested in comparing results of two or more effectiveness studies.

The final area to be included in this review of organizational effectiveness concerns two salient properties of organizational effectiveness which have contributed to the ambiguity and confusion Cameron asserts is typical in the literature addressing organizational performance.

As a construct, the first property, organizational effectiveness cannot be observed directly. Constructs differ from concepts in that they cannot be generalized from specific to abstract, concepts can and frequently are in theory development.¹⁶¹ Cameron argues:

"This difference . . . helps explain why no single model of effectiveness is acceptable . . . Each of the models of effectiveness is valuable in its own right because it includes distinctions absent in the others. But no model has enough explanatory power to supersede the others."¹⁶²

The idea that organizations have domains of relative effectiveness was presented above; however, it should not be inferred that the boundaries of organizational effectiveness are known. Cameron asserts " . . . the construct space has never been mapped

fully."¹⁶³ Different criteria can serve as indicators of effectiveness even though they are unrelated and contradictory. Efficiency is a measure of the absence of organizational slack; adaptability is a measure of the availability of slack, yet both are used as indicators of effectiveness.

Subjectivity, the second property of organizational effectiveness stems from the presence of the values and preferences of so called strategic constituencies. The variety of values and preferences among and between various constituencies present four rather well defined problems for researchers:

First, it is difficult to identify criteria that match the preferences of more than one constituency, especially in the not-for-profit sector. Second, preferences change, sometimes dramatically, over time. Third, individuals frequently cannot even identify their own preferences for an organization. And fourth, a variety of contradictory preferences may be pursued simultaneously in the organization.¹⁶⁴

Domain

The notion of interdependence offers the opportunity to introduce the concept of coupling as a property of organizational domain. Glassman's¹⁶⁵ notion of loose coupling is similar to Simon's¹⁶⁶ empty world hypothesis, where he posits that most things are weakly connected to other things, if connected at all. Weick adds, "Loose coupling occurs either when two separate systems have few variables in common or when the common variables are weak compared to the other variables that influence the system.

Two systems that are joined by few common variables or weak common variables are said to be loosely coupled."¹⁶⁷

Pfeffer and Salancik suggest:

Loose-coupling is an important safety device for organizational survival . . . The fact that environmental impacts are felt only imperfectly provides the organization with some discretion, as well as the capability to act across time horizons longer than the time it takes for an environment to change.¹⁶⁸

Feibleman and Friend provide a useful perspective for considering the "coupling" concept. First they consider the basis of organization which begins by regarding the organization itself as a whole. The whole, then, may be analyzed in terms of its parts and the parts are formed from subparts. From this they assert ". . . it is our contention that for purposes of analysis of structure no more is required than the whole from which the analysis starts and two levels of analysis."¹⁶⁹

The analysis of the relations between parts of an organization is aided by an understanding of the determinate ones, organization qua organization; that is, the following relations are necessary to describe the concept organization at the level specified, parts and subparts.

- a) Transitivity is such that if it relates two parts to a middle part, it relates the extreme parts to each other. Intransitivity is the absence of this relation . . .
- b) Connexity is the relation of two parts without the mediation of a third part . . .
- c) Symmetry is the relationship in which the interchange of the parts does not involve any change in the relation. Asymmetry is the relation in which the interchange of the parts does involve a change in the relation . . .

- d) Seriality is the relation which is transitive, asymmetrical, and connected. Aseriality is the absence of any one of these relations . . .
- e) Correlation (one-many₁, one-one₂, many-one₃, many-many₄) is the relation between two series such that for every part of one series there is a corresponding part in the other series and no part of either series is without a corresponding part in the other . . .
- f) Addition is the relation of the joining of parts so as to increase their number . . .
- g) Multiplication is the relation of the joining of parts so as to involve them with each other . . .
- h) Communication is the relation in which addition and/or multiplication is symmetrical . . .
Non-Communication is the relation in which addition and/or multiplication is asymmetrical . . .
- i) Association is the relation which is commutative and connected . . .
- j) Distribution is the relation which is commutative and intransitive . . .
- k) Dependence is the relation in which the existence of one part is conditioned by some other part . . . 170

Finally, Feibleman and Friend provide the following rules of organization which operationalize the basis of organization and the elements of relations between constituent parts:

- 1) Structure is the sharing of subparts between parts
- 2) Organization is the one controlling order of structure
- 3) One more level is needed to constitute an organization than is contained in its parts and subparts
- 4) In every organization there must be a serial relation
- 5) All parts are shared parts

6) Things in an organization which are related to parts of the organization are themselves parts of the organization

7) Things in an organization which are related to related parts of the organization are themselves parts of the organization

8) The number of parts and of their relations, i.e. subparts, constitutes the complexity of an organization. e.g. by counting the number of parts and subparts a value for complexity can be stated.¹⁷¹

The following typology describes the logical and structural differences of organizations flowing from the basis, elements and rules of organization noted above. The first "kind" of organization to be considered is the agglutinative. Its controlling relation is aseriality, where the elements for describing parts are intransitivity, connexity and symmetry. This is the loosest form of organization and it could be argued that since it violates rules 1, 4, 5 and 6 of the rules of organization it is nothing more than an aggregate of independent organizations. "We include the agglutinative as an organization only because of its illustrative value as a borderline case."¹⁷²

The second kind of organization noted by Feibleman and Friend is the participative. Its controlling relation is seriality. This category of organizations is the most frequently encountered and where, in the agglutinative type parts have only the spatial relation of contiguity, in participative types additional relations exist binding them closer together; that is, parts are held together by the

subparts they share. However, the ways this sharing occurs may vary and therefore a subclassification is necessary to explicate the difference.

- o Adjunctive organizations are the most loosely-compiled of the participative kind. While parts share subparts, this sharing is not so integral to either part that separation would be fatal.

Thus to a certain extent parts are independent of the organization of which they are parts, and this independence contributes to the flexibility of the whole organization.¹⁷³

- o Subjective (subordinate) organizations are more tightly coupled. While parts share subparts only one could survive separation.

- o Complemental organizations are tightly coupled. Parts share subparts and this relation is critical to both the parts.

In the case of complementary organizations, the governing relation is one of symmetrical dependence. This means that parts are on a parity with respect to their relations with other parts, and that each is dependent upon the other.¹⁷⁴

The theory of organization described above was considered from a static perspective, but to understand how organizations function it is also necessary to consider them from a dynamic standpoint. To illustrate the dynamics of organization structure Feibleman and Friend suggest, "The effect within upon parts (the strains) will be examined as it is occasioned from without by the interaction of wholes (the stresses). Or, conversely, the effect upon wholes (the stresses) will be examined as it is occasioned by the

interaction of parts (the strains). Viewed either way, what is being considered is function."¹⁷⁵

Dichotomies for seven (7) elements of interaction in a dynamic state are noted:

1. Organization-Environment. The relation of organization to environment is a reciprocal election. . . .

2. Action-Reaction. Every actual organization is in constant change or motion. This change or motion is of two sorts. The environment changes the organization and the organization changes the environment. . . .

3. Availability-Virtual Indifference. Availability is a characteristic of a limited part of the environment of an organization--that part which, determined by the nature of the organization, importantly affects and is affected by it. Virtual indifference is a characteristic of that less limited part of the environment of an organization--that part which, determined by the limited nature of the organization, hardly affects or is affected by it. . . . [Stated another way, the organization must attend to relations of availability and can ignore the rest until circumstances change the mix and actors move from one category to the other.]

4. Equilibrium-Disequilibrium. Equilibrium is the condition in which the influence exerted by the organization upon its available environment and the influence of the available environment upon the organization are in balance. . . .

5. Saturation-Insufficiency-Superfluity. Saturation is the condition where . . . all parts share and all subparts are shared. Insufficiency is the condition where all parts share and there are some unshared subparts. Superfluity [the opposite condition] is . . . where there are some unsharing parts and all subparts are shared. A saturated organization is one which hardly reacts with the available environment. It is more or less 'satisfied' . . . There is an optimal pragmatic limit to the numbers of parts in an organization. An insufficient organization is one which is to be satisfied or saturated, and which is therefore elective . . . A superfluous organization is over saturated, and can achieve equilibrium only by

interacting with the available environment in order to get rid of its superfluous parts. . . .

6. Flexibility-Rigidity. [An organization's capacity for change without suffering disorganization is flexibility.] A rigid organization . . . must resist absolutely the action of the available environment, for if it cannot it falls into disequilibrium, i.e. it is destroyed as an organization. . . .

7. Stability-Instability. Stability is the capacity of an organization to remain in equilibrium. . . .¹⁷⁶

Just as there were rules of organization reflecting the static state so are there rules of interaction reflecting the dynamic state. The following rules describe how the interacting elements function.

1. Every organization elects some other organization or organizations. Dynamics pervades the organizational field. No organization is ever at rest or neutral toward all other organizations

2. In every action there is a sharing and an interchange. No action ever takes place without altering all those organizations which are involved in the action. . . .

3. All action is occasioned by the available environment. Every strain in an organization is initiated by the stress. The largest change may take place within the organization, which may in turn react with the environment; but even in this case the initial disturbance must have occurred in the environment But although the organization is dynamical in its response, it is never absolutely initiative. . . .

4. Available environment is limited by interaction with organization. We have said that available environment is that part of the environment which importantly affects or is affected by the organization. We can see now that by 'importantly affects' is meant interacts dynamically. . . .

5. All organizations strive toward equilibrium . . . its absolute attainment would mean permanence for the attaining organization. . . .

6. Saturated organizations remain unchanged. An ideally saturated organization by definition could not interact with the environment since it has nothing to give to it and wants to take nothing from it. . . .

7. Insufficient and superfluous organizations tend to change. Under- and over-saturated organizations react with the available environment in the effort to gain an equilibrium. . . .

8. Flexibility is a condition of growth. . . . The condition of flexibility depends upon the internal constitution of the organization, i.e. upon the fact that its parts are independent to some extent. This makes growth possible. . . .

9. Rigidity is a condition of maintenance. The more resistance an organization offers to the environmental changes imposed on it, the more permanent it is. The condition of rigidity depends upon the internal constitution of the organization, i.e. upon the fact that its parts are interdependent to some extent and closely knit. . . .

Interdependencies and the rules of interaction stated above provide the framework for describing the kinds of interaction expected from the dynamic sequence of stimulus-response-effect in the relations between organization and environment. Stimuli generated by the environment are of three types: 1) negligible, insignificant to the point of no response; 2) effective, actually may vary from minimal to optimal to drastic and produces either a tenacious, elastic, or self-determinative response by the organization; 3) destructive, excessive to the point that it destroys the organization. A further comment concerning effective environmental stimulus is in order. The character of the organization will determine the nature of the response.

A tenacious response is one which is marked in the organization by a tendency to preserve its original available environment, and thus by fending off external intrusions it resists any change whatsoever An elastic response is one which is marked in the organization by a tendency to give and take with its original available environment, and thus by working with external intrusions it resists change A self-determinative response is one which is marked in the organization by a tendency to change with its available environment and yet to remain itself by taking elements from the available environment and transforming them to suit itself.¹⁷⁸

The effect each of these organization responses has on the environment range from little or none, tenacious; to adjustive, elastic; to extensive when it takes the self-determinative form.

The conservative effect on the environment is that of resistance; whereas the adjustive and the extensive are those of cooperation. The first is blind; the second and third progressively perceptive. The area of available environment becomes wider with each of the three types of effect.¹⁷⁹

If the organization does not respond to the available environment it will perish. The interaction between the external disturbances and the conservative tendency (equilibrium) of the organization causes a variety of changes which may take several directions, or "dodges" to escape destruction. These dodges, as noted above, are tenacity, elasticity, and self-determination. The dodges of tenacity and elasticity reflect degrees of status-quo. These strategies restrict growth in complexity and so their integrality has too little to integrate.

Self-determination on the other hand is a dodge which seems indefinitely capable of improvement and this dodge alone gives the opportunity for working

toward the ideal. However, the self-determinative organization, by its very ability to grow has to sacrifice a large amount of its integrality . . .¹⁸⁰

The available environment consists of the organization's internal relations and its external relations. These relations have boundaries, however indefinite they may be. The aggregate relations taking place within those boundaries represent the organization's domain(s). Mapping these boundaries is not easy; "Specifying the boundary of an organization is akin to specifying the boundary of a cloud. The lines are fuzzy--especially when there is a great deal of movement, change, and other turbulence."¹⁸¹

Climate

It is, of course, obvious that relations internal to the organization are within the organization's domain, and if the unit of analysis in this study were units or subunits of the organization it would be necessary to evaluate each of these analytical entities in terms of its unique "domain." The domains of members, subunits and units overlap within the organization and, in fact, extend beyond the organization's internal environment. The external boundaries of unit and subunit domains, however, do not necessarily coincide with those of the focal organization: Perrow, 1968; Etzioni, 1961; Thompson, 1967; Levine and White, 1961; and Connor, 1980. It is this mismatch which may lead to conflicts and ultimately influence the

relationship between the organization and its available environment.

According to Miles et al., the pattern of interdependencies which the organization must cope with is determined by the domain(s) it establishes.

For example, if the organization decides to be a general hospital, it defines a pattern of interdependence with environmental elements that may be distinctly different from a hospital specializing in only a few ailments.¹⁸²

Another way to consider the complex of relations which exist within the organization's domain is with the construct, organizational climate. The literature describing this notion may be divided into three perspectives:

1. Multiple Measurement-Organizational Attribute Approach which regards organizational climate exclusively as a set of organizational attributes or main effects measurable by a variety of methods; . . .¹⁸³

Representative of . . . This approach is the definition of organizational climate as a set of characteristics that describe an organization and that (a) distinguish the organization from other organizations, (b) are relatively enduring over time, and (c) influence the behavior of people in the organization.¹⁸⁴

2. Perceptual Measurement-Organizational Attribute Approach which views organizational climate as a set of perceptual variables which are still seen as organizational main effects; . . .¹⁸⁵

Organizational climate was defined as a set of attributes specific to a particular organization that may be induced from the way the organization deals with its members and its environment. For the individual member within an organization, climate takes the form of a set of attitudes and expectancies which describe the organization in terms of both static characteristics (such as degree of autonomy) and behavior--outcome and outcome--outcome contingencies.¹⁸⁶

3. Perpetual Measurement-Individual Attribute Approach which views organizational climate as perceptual and as an individual attribute.¹⁸⁷

What is psychologically important to the individual must be how he perceives his work environment, not how others might choose to describe it.¹⁸⁸

James and Jones have argued that the construct organizational climate is subject to both serious theoretical and methodological problems. They have recommended that a different approach might help clarify the use of the term. They would rearrange the three approaches to produce two distinct designations for climate: organizational climate, limited to organizational attributes; and psychological climate, limited to individual attributes. While this may permit increased clarity of definition and measurement, the authors ". . . feel that a definitive conceptual statement of the nature of organizational climate is not possible at the current stage of research."¹⁸⁹

Consistent with the selection of the organization as a unit of analysis and the caveat offered by James and Jones, climate is treated in this study as a set of organizational characteristics that are real insofar as they are perceived by the organization's membership. The term "organizational climate" stems from the fact that researchers concerned with a taxonomy of situational characteristics have borrowed from the methodology of differential psychology making considerable use of the factor analytic approach, and in doing so tended to use the term in place of "environment" or "situation."¹⁹⁰

Forehand and Gilmer have identified and defined three mechanisms which account, in part, for the way individual behavior reflects differences in organizational environment.

1. Definition of stimuli. Environmental characteristics such as the structure of an organization, the implicit theories held by its management, or the economic condition of the industry have considerable influence on the relevant stimuli which impinge on an individual in his work role.

2. Constraints upon freedom. Certain attributes of the situation may actually prevent certain behaviors from occurring. The structure of the organization may place a number of constraints on management communication or the degree of autonomy. Such structurally imposed constraints may be either deleterious or facilitative, relative to performance effectiveness.

3. Reward and punishment. Besides influencing what sorts of stimuli will be perceived and what types of responses are permitted, the environment can also specify the reinforcement contingencies for various managerial behaviors.¹⁹

These mechanisms may help explain why postsecondary educational institutions have met resistance by faculty and unit administrators when undertaking planning initiatives. The issue of autonomy in education is well known; institutions protect it and individuals both protect and covet it. But how does it flow, is autonomy a right held by the individual and shared with the institution, thus diminishing his/her absolute portion; or, is it a characteristic of organization which flows to members in some hierarchical fashion? One test, suggested by the mechanisms described by Forehand and Gilmer is the individual's perception of the ability to act, or not to act

independently. The notion of wholes offered by Feibleman and Friend would indicate that when planning assistance is withheld, the individual has assessed the environment as loosely coupled and his/her maintenance of autonomy is nonthreatening to the agglutinative host; or, the individual has assessed the environment as tightly coupled and it is an act of hostility to the complemental organization.

A number of studies concerned with organizational climate have been conducted, Connor in synthesizing the results of those he reviewed, noted four factors were consistantly reported as important:

- 1) Individual autonomy
- 2) The degree of structure imposed upon the position
- 3) Reward orientation
- 4) Consideration, warmth and support.¹⁹²

Connor describes two contrasting organizational models and the climate each invokes. The first is characterized as closed (relatively), stable and mechanistic. In this model organizational goals focus on the attributes efficiency, stability and security. Environmental conditions are placid, the level of uncertainty is low, and the organization's structure is relatively simple, composed of a small number of parts; low role variety and high formalization/standardization/centralization. Its technology is simple, requiring low levels of skill by members who, in turn, exhibit low levels of commitment.

Organization climate in such organization's will tend to be characterized by:

1. Individual autonomy, low
2. Degree of structure imposed upon the position,
high
3. Reward orientation, low
4. Consideration, warmth and support, low.

A contrasting organizational model is characterized as open (relatively), adaptive and organic. In this model organizational goals focus on adaptability, innovation, growth, and risk taking and the goal mix is relatively complex. Environmental conditions are turbulent and uncertain. The organization's structure is complex, informal and role variety high. Its technology is complex, nonroutine and reflects low levels of standardization. Members will have high skill levels and relatively high commitments. Tasks are broad in scope and control processes are interpersonal, relying on norms and values established by peers.

Organizational climate in this type of organization will tend to be characterized by:

1. Individual autonomy, high
2. Degree of structure imposed upon this position,
low
3. Reward orientation, high
4. Consideration, warmth and support, high.

These two models represent extreme types which one would expect to find near each end of a continuum of organization structure characteristics. Most actual organizations will fall somewhere between the models when considered on the four variables offered by Connor.¹⁹³

The external environment presents a far more complex set of relations than organizational climate; however, this study will continue to use the concepts of boundary and domain as the central framework for reviewing the literature on the second unit of analysis, environment.

The Planning Context: Environment

One reason the units of interest in this study are limited to organization-environment and do not include the individual, is that the parts and subparts of the organization, as described by Feibleman and Friend, are behaviors and not individual people. Weick states, "It is vital to note that it is behaviors, not persons, that are interstructured."¹⁹⁴

Any given individual is only partially included in any system of organized behaviors, being also partly included in many other behavior systems as well. Consequently, it is perfectly possible for a person to be both part of an organization and part of its [external] environment through different behaviors occurring at different times.

Typology

There are many typologies available for describing the interaction of the organization and its external environment. The concept of loose-coupling was presented

earlier and implied that other organizations, collectivities, coalitions and individuals exist in the organization's available environment.

Thomas offers an interesting analysis; he divides the environment into a hierarchy beginning with internal, which consists of the relations within the firm's official jurisdiction; the next level is labeled the operating environment and includes suppliers and other interest groups with which the firm deals; and the general environment, which is the national and global context of social, political, regulatory, economic and technological conditions.

In Thomas' structure the internal and operating environments are equivalent to Feibleman and Friend's available environment. But contrary to them, Thomas also attached substantial importance to the general environment vis-a-vis the firm, ". . . the general environment is at least as important as operating environment analysis for purposes of corporate strategic planning."¹⁹⁶

The importance of the available or operating environment is that relations occurring there (between the organization, which will subsequently be referred to as the focal organization and other organizations which it interacts with, the organization set) present less uncertainty to the focal organization and outcomes are relatively less problematic than relations stemming from the general environment.

Emery and Trist, in their seminal work provide still another perspective of the organization-environment relation. Their work builds on the concepts of system theory; the work of Feibleman and Friend, reviewed earlier, also utilized systems theory, but their construct focused on the relations of wholes to parts, a closed system (relatively).

"In contradistinction to physical objects, any living entity survives by importing into itself certain types of material from its environment, transforming these in accordance with its own system characteristics, and exporting other types back into the environment. By this process the organism obtains the additional energy that renders it 'negentropic'; it becomes capable of attaining stability in a time-dependent steady state--a necessary condition of adaptability to environmental variance."¹⁹⁷

The concept of entropy, on the other hand, is derived from the second law of thermodynamics which states that no work can be done when equilibrium is reached. However, the steady state of open systems differs from that of classical physics in that the capacity of the organism for work is maintained through openness to the environment, without which adaptability would be impossible, and continuity problematic.

The contribution claimed by Emery and Trist extended von Bertalanffy's formulation, which allowed the exchange processes between the organization and elements in its environment to be viewed from a holistic perspective, to include those processes in the environment itself which are among the determining conditions of the exchanges. They

credit the prior work of Tolman and Brunswick (1935) for suggesting the term the causal texture of the environment which overarches the earlier work, von Bertalanffy's and theirs, so as to permit the following general proposition:

that a comprehensive understanding of organizational behavior requires some knowledge of each member of the following set, where L indicates some potentially lawful connection, and the suffix 1 refers to the organization and the suffix 2 to the environment:

$$L_{1\ 1}, L_{1\ 2}$$

$$L_{2\ 1}, L_{2\ 2}$$

$L_{1\ 1}$ here refers to processes within the organization--the area of internal interdependencies; $L_{1\ 2}$ and $L_{2\ 1}$ to exchanges between the organization and its environment--the area of transactional interdependencies, from either direction; and $L_{2\ 2}$ to processes through which parts of the environment become related to each other--i.e. its causal texture--the area of interdependencies that belong within the environment itself.¹⁹⁸

The causal texture of the environment as described here is considered as a quasi-independent domain.

This proposition led Emery and Trist to four "ideal types" of causal textures, which, while useful in differentiating organizational environments, also exist "simultaneously in the 'real world' of most organizations--though, of course, their weighting will vary enormously from case to case."¹⁹⁹ The first three types have been described by a number of theorist representing a variety of disciplines. The fourth, was identified by Emery and Trist. As indicated above, they consider these "types" to represent stages or steps, each leading to increasing degrees of complexity.

Step one. Placid, randomized environment. The simplest type of environmental texture . . . in which goals and noxiants ('goods' and 'bads') are relatively unchanging in themselves and randomly distributed . . . While organizations under these conditions can exist adaptively as single and indeed quite small units, this becomes progressively more difficult under the other types (Also described by Simon (1957); Ashby (1960); and Schutzenberger (1954)).²⁰⁰

Step two. Placid, clustered environment. More complicated . . . characterized in terms of clustering: goals and noxiants are not randomly distributed but hang together in certain ways . . . and is the case with which Tolman and Brunswick were concerned; it corresponds to Ashby's 'serial system' and to the economist's 'imperfect competition' . . .

The new feature of organizational response to this kind of environment is the emergence of strategy as distinct from tactics. Survival becomes critically linked with what an organization knows of its environment . . . In the clustered environment the relevant objective is that of 'optimal location,' some positions being discernible as potentially richer than others.

To reach these requires concentration of resources, subordination to the main plan, and the development of a 'distinctive competence,' to use Selznick's (1957) term, in reaching the strategic objective. Organizations under these conditions, therefore, tend to grow in size and also to become hierarchical, with a tendency towards centralized control and coordination.²⁰¹

Step three. Disturbed-reactive environment. It may be compared with . . . the economist's oligopolic market. It is a type 2 environment in which there is more than one organization of the same kind; indeed, the existence of a number of similar organizations now becomes the dominant characteristic of the environmental field. Each organization . . . will wish to improve its own chances by hindering the others, and each will know that the others must not only wish to do likewise, but also know that each knows this. . . .

If strategy is a matter of selecting the 'strategic objective'--where one wishes to be at a future time--and tactics a matter of selecting an immediate action from one's available repertoire,

then there appears in type three 3 environments to be an intermediate level of organizational response--that of the operation . . . The new element is that of deciding which of someone else's possible tactics one wishes to take place, while ensuring that others of them do not . . . The flexibility required encourages a certain decentralization and also puts a premium on quality and speed of decision at various peripheral points.

It now becomes necessary to define the organizational objective in terms not so much of location as a capacity or power to move more or less at will, i.e. to be able to make and meet competitive challenge. This gives particular relevance to strategies of absorption and parasitism. It can also give rise to situations in which stability can be obtained only by a certain coming-to-terms between competitors, whether enterprises, interest groups, or governments. One has to know when not to fight to the death.²⁰²

Step four. Turbulent fields. In these, dynamic processes, which create significant variances for the component organizations, arise from the field itself. Like Type 3 and unlike the static types 1 and 2, they are dynamic. Unlike type 3, the dynamic properties arise not simply from the interaction of the component organizations, but also from the field itself. The 'ground' is in motion.

Three trends contribute to the emergence of these dynamic field forces:

(i) The growth to meet type 3 conditions of organizations, and linked sets of organizations, so large that their actions are both persistent and strong enough to induce autochthonous processes in the environment . . .

(ii) The deepening interdependence between the economic and the other facets of the society. This means that economic organizations are increasingly enmeshed in legislation and public regulation.

(iii) The increasing reliance on research and development to achieve the capacity to meet competitive challenge. This leads to a situation in which a change gradient is continuously present in the environmental field.

For organizations, these trends mean a gross increase in their area of relevant uncertainty.²⁰³

Under type 4 conditions trends reflecting past and present situations are meaningless, new factors or value shifts in old elements may lead to consequences which become increasingly unpredictable. Organizational stability is threatened. In these environments the emergence of "values that have overriding significance for all members of the field"²⁰⁴ become equivalent to strategy and operations as potential solutions under type 2 and 3 conditions. Here social values are regarded as coping mechanisms for dealing with persistent areas of relevant uncertainty.

As effective values emerge, Emery and Trist assert, the character of tightly coupled, turbulent fields will transform to more loosely coupled and placid fields which are ". . . simplified and relatively static. Such a transformation will be regressive, or constructively adaptive, according to how far the emergent values adequately represent the new environmental requirements."²⁰⁵ Changes stemming from such transformations, to be managed effectively, require new paradigms for action.

One such paradigm may be the replacement of the hierarchically structured forms with which we are familiar in favor of a form more conducive to cooperation. Type 3 environments promote accommodation between like, but competitive, organizations with futures which are to some degree negatively correlated. Type 4, turbulent environments will require a structure which promotes accommodation between dissimilar organizations whose

interests are, basically, positively correlated. "This means relationships that will maximize cooperation and which recognize that no one organization can take over the role of 'the other' and become paramount. We are inclined to speak of this type of relationship as an organizational matrix."206

A familiar organizational matrix type structure is the professional organization. Such structures serve as standard (value) setting mechanisms which tend to limit membership in terms of numbers, values and competence.

We do not suggest that in other fields than the professional the requisite sanctioning can be provided only by state controlled bodies. Indeed the reverse is far more likely . . . As with values, matrix organizations, even if successful, will only help to transform turbulent environments into the kinds of environments we have discussed as 'clustered' and 'disturbed-reactive'.209

While a degree of stability could be expected with such transformations, an organization could not expect environments identical with the original to result. "The strategic objective in the transformed cases could no longer be stated simply in terms of optimal location (as in type 2) or capabilities (as in type 3). It must now rather be formulated in terms of institutionalization." Selznick²¹⁰ has indicated that organizations become institutions when they are able to relate to wider society through the embodiment of congruent values. Green²¹¹ relates this condition to education.

Once the need for transformation is recognized a change in the thrust of the organization, strategic

planning, is required. As institutionalization increasingly becomes a prerequisite for stability, policy formulation must reflect both a recognition of goals congruent with the organization's own character, and selection of goal-paths which recognize, and are congruent with the interests of other parties. Economic indicators, social indicators and systems of national accounts are techniques which, if ever fully developed, hold some promise as a tool(s) for mapping such goal-paths.

It is possible that "coordinating/regulating" organizations will be developed to meet the problems stemming from the type 4 environments. If the pathology of existing structures is not understood, however, these new organizations may ". . . be construed in type 3 terms, and attempts will be made to secure for them a degree of monolithic power that will be resisted overtly in democratic societies . . . preventing them from ever undertaking their mission . . ." ²¹² (vis attempts to coordinate higher education by the Michigan Department of Education).

McGregor's ²¹³ dichotomized value system represented by theory "X" and theory "Y" is clarified, according to Emery and Trist, through the perspective provided by the four environmental types, as representing a trend in value change. Type 4 environments, may present some discontinuity in such trends and may be explained more rationally as a value shift or a change requiring a new paradigm for explication. "The establishment of a new set of values is a

slow social process requiring something like a generation--unless new means can be developed."²¹⁴

Perhaps the most abstract of the several typologies depicting relations between the organization and the external environment, and members internal to the organization is Parsons' concept of the imperative functions of social systems. In this model the organization's environment is bifurcated between internal and external relations on the vertical axis and the organization's functions are bifurcated between instrumental (means) and consummatory (ends) along the horizontal axis: the cell formed by the intersection of external--instrumental is labeled "Adaptation," and represents continuity and stability over time in relation to the environment; the cell formed by the intersection of external--consummatory is labeled "Goal-Attainment" and represents gratification in relation to the environment; the cell formed by the intersection of internal--instrumental is labeled "Pattern-Maintenance" and represents continuity and stability over time in relations among members; and the fourth cell, formed by the intersection of internal--consummatory is labeled "Integration" and represents gratification in relations among members.²¹⁵

The model suggests two fundamental problems with which every organization must deal: 1) Whether to give priority to the problems existing in the internal environment between members, or to the problem of improving

relations with the external environment. 2) The trade-offs of balancing the assignment of priority between continuity and stability over time, or consummation.

The two salient points concerning this dimension of the model are: it describes a resource allocation problem; and one of the imperative functions is usually primary and indicative of the character/mission of the organization. This knowledge is important in understanding the nature of the organization's domain and the types of exchanges likely to occur along its boundaries, the pattern variables.

The second and third dimensions of Parsons' model deal with the hierarchy of the organization and its interface with society (environment). One might consider a continuum with the most unified level at the top and the most highly differentiated levels at the bottom: the lowest level, technical, is characterized by roles; the next level, managerial, is characterized by collectivities; the next level, institutional, is characterized by institutionalized norms and the highest, societal, is characterized by a system of values.

To summarize, Parsons' model consists of the following variables:

- o Functional imperatives. Adaptation, goal-attainment, pattern-maintenance, and integration.
- o Organization levels. Technical, managerial, institutional and societal.

- o Organizational hierarchy. Roles, collectivities, norms and values.

The relationship between organizational levels and hierarchies explained by this model is important in understanding the following environmental typology which consists of the segments: social; economic; political; technical and regulatory.

In Parsons' model for example, occupational roles are organized into specific functions, collectivities, regulated by what Parsons terms generalized institutions, which include: contracts, property, authority and other institutionalized norms. In this example, occupational roles exhibiting certain organization behavior established by the management function responsible for a certain collectivity, might engage and interact with one or more environmental segments but not all; transactions would be limited to those legitimated by the value system controlling the transaction.

Segment

Segmenting the environment by major societal institutions and value systems reflects the highest level of societal ordering. Four segments are most often referred to: Social, Economic, Political and Technological; a fifth, Regulatory, is gaining some attention.²¹⁶ Many problems, however, have been encountered by both users and developers of information at this level of analysis.

Social Indicators

The desire to collect data reflecting societal conditions is as old as recorded history,²¹⁷ examples are found in The Holy Bible, Numbers, I; The Constitution of the United States, Article I, Section 2 authorized the census and Article II, Section 3 requires that the President "shall from time to time give to the Congress information of the State of the Union."²¹⁸

To comply with this mandate, the President relies on a sophisticated data collection and analysis system, which produces such critical reports as the budget and related "messages", started under the Budget and Accounting Act of 1921; the Economic Report initiated by the Employment Act of 1946, the Manpower Report initiated by the Manpower Development and Training Act of 1962; and various documents such as the Statistical Abstract of The United States. The Budget Message and the Economic Report are now integral to the annual State of the Union message.

The "state" noted above, however, is one described almost entirely by numbers; "how much" is not necessarily fungible with "how good." Such reports tell little about the structure of society or the fabric woven from the interaction, or absence thereof, by its members. This condition does not indicate lack of interest, only a failure to produce meaningful information reflecting quality of life.

Throughout the twentieth century attempts have been made to cure this deficiency by investigating aspects of society other than those economic; the report, Recent Social Trends in the United States published by the Hoover Research Committee in 1943 is an example.²¹⁹ A major step, in this direction, was taken in the 1960s stemming from momentum gained by President Johnson's "Great Society" legislation; the earlier work of the Department of Health, Education and Welfare during the Kennedy administration, culminating in HEW Trends, an annual publication; and the monthly HEW Indicators. These reports were the forerunners of the triannual Social Indicators, first published in 1973.

In 1966, the National Commission on Technology, Automation and Economic Progress published a report critical of the nation's ability to "chart" social change, and called for the development of a system of social accounts.²²⁰ Parallel to the increasing interest in developing general systems for reporting on the quality of life, the National Aeronautics and Space Administration was looking at the problem in a more parochial way; the security and success of its mission.

Because that "mission" was pervasive, NASA was not only interested in its primary impact on the nation's economic and social institutions, it was also concerned with secondary effects.

NASA has been charged with a broad primary mission--the exploration of space--with numerous related subsidiary missions. Manifestly, the administrator of NASA must give priority to

feedback that affects the Agency's ability to carry out its primary mission. Since ability to execute the primary mission is affected by a wide range of concerns--including support in the various publics, Congress, and other branches of the administration . . . With these issues in mind, even a casual reading of the newspaper will reveal that NASA is already aware of, and having to deal with a considerable number of second-order consequences of its primary mission.²²¹

The basic problem, as perceived by NASA, was one of communication; more specifically, feedback. Based on experience, NASA was confident that the "system" of organized interest groups would provide information with little direct initiative on the part of NASA; however, such information almost always reported hurts and concerns. The kind of information NASA was looking for would allow it to anticipate such problems thus permitting the agency to avoid or reduce the impact on its programs of undesirable/unnecessary public pressure; an information system that "feeds forward."

The highest priority in building a deliberate feedback system in the environment must be given to the earliest possible detection or anticipation of impacts that bear on the primary mission. In this way opportunities can be capitalized on maximally, and difficulties nipped in the bud.²²²

The system proposed by NASA was constrained in two important ways: 1) the amount of information entering the system must not exceed its processing capacity, "Once that limit is exceeded, the organization will be less rather than more, responsive to its environment . . . ;"²²³ 2) problem identification, for which information is sought by the system, must not exceed the agency's desire or ability to

render solutions, "Any information system that is explicitly identified with a given program ought to be constructed and operated in such a way that it does not create the impression that it is concerned with issues clearly beyond its capacity to handle."²²⁴

The system of social indicators of interest to NASA, however, would be more than a feedback mechanism for assessing the consequences of actions, it would also have the additional requirement of anticipating possible futures.

. . . the purpose of social indicators is not primarily to record historical events but to provide the basis of planning for future policies. Such planning should not be based on the assumption of the single most probable outcome, nor should it confuse the probability with the seriousness of the outcome. Rather, it should take into account the range of important consequences that can be anticipated, and both their probability and importance should also be considered. . . .²²⁵

NASA's commitment to achieving its primary mission, space exploration, and its concern for the impact its programs might have on society, "second degree" consequences, led the agency to commission, in 1962, the seminal work Social Indicators, which was published in 1966 and edited by Raymond A. Bauer. Since then thousands of articles and hundreds of more lengthy texts have appeared on the topic. Many have contributed to theory or reported important empirical findings. Most of the social indicator literature addresses two salient themes: aggregation and selection of surrogate variables.

Until consensus of paradigm making magnitude is reached, however, by researchers and users concerning these

primary issues, the potential of social indicators will not be fulfilled. Nevertheless, theoretical frameworks and constructs useful in assessing the organization's environment have come from the research on social indicators, and while an accepted system of social accounting has not been realized, indicator theory can be used, selectively, to good advantage for policy formulation in such public interest areas as postsecondary education.

Social indicators have been grouped and segmented in a variety of ways by numerous investigators interested in some conceptual aspect of society.

A social indicator is defined as the operational definition or part of the operational definition of any one of the concepts central to the generation of an information system descriptive of the social system.²²⁶

The typology offered by Carlisle is based on the social indicator's use within the information system. The categories are not intended to be mutually exclusive and are based on the operationalization of the central concepts implied in the above definition: system components; system goals; social problem areas, and policy goals.

First, informative indicators. This category consists of operationalized system components and goals. It is intended to describe both the static and dynamic nature of the social system; data is subject to regular production as time series, with the possibility of disaggregation by the most relevant variables. Indicators in this category are not intended to explain or provide remedies for the social condition they describe.

Informative indicators, together with the system of social statistics backing them up should eventually provide a more balanced descriptive account of the social system than is at present available. However, the absence of a social theory specifying the components of the social system and their relationships has repercussions for both the construction and interpretation of the information system. Firstly, there is no guarantee that it is anything other than partial and subjective. Secondly, in many areas of social life the description provided by informative indicators will not be capable of normative interpretation. It will be only in those areas positively or negatively valued by society or related to the latter by existing social theories, that 'diagnosis' will be possible . . .

The question is whether purely descriptive informative indicators will serve any practical purpose apart from the generation of necessary sections of the overall information system. . . .²²⁷

Of course, the answer lies in the use to which informative indicators are directed and by whom. As the description of society becomes more complete, it could be argued, new theories will emerge requiring new data; thus the additional availability of information and theory development could become mutually stimulating. Assuming continued development, "For the policy overseer and the politician, informative indicators will provide a precis of the social situation perhaps allowing for a more rational choice of priorities within the prevailing value system. Indicators will not be expected to set priorities."²²⁸

Secondly, predictive indicators. This category consists of "operationalized system components and goals that fit into explicit models (in this sense, theoretical reconstructions) of the social system or its components."²²⁹

Predictive indicators are of special importance to policy-makers. Not only could they warn of future shortfalls in existing programs, they could identify the need for new programs.

Thirdly, problem-oriented indicators. This category consists of operationalized social problem areas. "Each component part of the problem, i.e. each goal, should be represented by a problem-oriented indicator or indicators."²³⁰ It will be the responsibility of the policy-maker to assess against performance or needs criteria what changes are required and to design programs for effecting those changes. It is the task of the researcher to provide the relevant information.

Finally, program-evaluation indicators. This category consists of policy 'targets.' Once a program has been implemented it is necessary to measure how effectively it is meeting its goals and objectives, and how efficiently it is using the resources made available to it. Program-evaluation indicators are intended to approximate such measures.

. . . until we have the theoretical framework adequate for the assessment of programme effectiveness or until we acquire the resources to carry out detailed research on all programmes implemented, we consider crude approximations to be better than no assessment at all, when scarce resources are being utilized and individuals manipulated. . . .²³¹

The social indicator typology suggested by Carlisle, while developmental and addresses immediate concerns within the British social system, is, nevertheless, typical of the

approach to social indicator research underway in the early 1970s in the United States and Europe as well. The influence of such social indicator research, based on general system theory, is clearly demonstrated in planning models developed for postsecondary education in the late 1970s.

The Resource Center for Planned Change has developed a model which they titled A Futures Creating Paradigm: A Guide To Long-Range Planning From The Future For The Future. The model is designed to focus attention on both trends and value shifts as the institution develops alternative scenerios leading to alternative futures. The model is divided into ten discrete stages.²³²

In stage I the institution identifies trend areas which it feels will be important in policy planning. These areas include local, regional and national concerns stemming from such topical issues as: population, government, global affairs, environment, energy, economy, science and technology, human settlements, work, lifestyle, women and participation.

In stage II the institution identifies societal values which it believes will prevail, change and emerge during the next decade. The underlying principle for this stage is ". . . the concept of societal values as basic to the dynamics of the planning process is based on the assumption that values drive institutions of higher education." The authors note that in terms of institutional

policy formulation, trends are relatively clear, at least procedurally. Values, however, represent ". . . a far more complex understanding Indeed, it is the direction within the societal structure that the value will take during the next decade and how this direction will determine the alternatives available to higher education that must be explored."²³³ Examples include: change, freedom, equality, leisure, foresight, pluralism, localism, responsibility, knowledge, quality, goals, and interdependence.

In stage III the institution develops a policy-making matrix for the trends identified in stage I. The model allows the institution to choose a simple method, "Approach 1," where all trend areas (political, economic, etc.) and sectors (curricula, faculty, students, etc.) affected are included on the same matrix; or, a more detailed method, "Approach 2," where each sector requires its own form.²³⁴

The developers of this model define a trend as "a strong and long-term societal movement; it represents the prevailing propensity in the social system."²³⁵ Further, trends may be strengthened or weakened by the effects of other trends--or values--within the social system.

A trend area is a system unto itself, composed of a number of trends and/or other forces that work separately or in concert. . . . But some trends are more independent of . . . the impacts of other trends . . . the further into the future a trend extends, the more likely it is to interact and intersect with other trends . . . the time horizon . . . becomes a significant determinator.²³⁶

Users of "Approach 2" are encouraged to segment the planning horizon into three time frames: the next three years; years four through nine, and ten years and beyond.

In stage IV the institution develops a policy-making matrix for value-shifts. Planners are warned that values mix easily and to avoid tracing the influence of the mix as opposed to discrete values; "values must be isolated by planners."²³⁷ When ever possible, the anticipated level of significance attached to each value should be based on expert opinion and/or the literature with the source and anticipated impact clearly stated.

In stage V the institution's objectives are formulated. This, of course, assumes that the institution's mission statement has been completed. This stage consists of two exercises: 1) identify potential objectives, sector by sector; 2) formulate an institutional objective from those identified in exercise 1.

What we have obtained is a view of how societal trends and values can come together, relate, and interrelate, and create the need to achieve a specific institutional objective.²³⁸

In stage IV the institution tests "the compatibility of objectives: with institutional purpose, with other objectives, and with value shifts."²³⁹ This is accomplished with cross-impact matrices.

In stage VII the institution develops detailed scenarios for the most optimistic and pessimistic cases.

In stage VIII the institution develops a path from the futures described in stage VII to the present. This is

achieved by starting with planning assumptions for milestone "X," which immediately preceeds and leads to objective "Y." Once milestone "X" has been described, then a set of tactics developed in earlier stages are envoked which will identify precedent events stemming from milestone X-1. This process is repeated until the present is reached.

In stage IX, labeled "Foresight" by the developer's of the model, the institution assesses the impact of its objectives when stated in policy terms.

Stage 9 of the planning paradigm is concerned with the possible results of proposed policies for the future on the sectors of the institution and the institution as a whole. It anticipates conditions caused by the impact of such policies.²⁴⁰

In stage X the institution tests for feasibility. In this model constraints are evaluated at the end of the process.

Restricting the free-flowing thrust of the paradigm--or checking the imagination of the planners--would seem to be counter-productive. Planning for the future is a process that requires conditions, and a maximum amount of open-mindedness on the part of the planners to deal with these conditions. Clearly, the climate within which this open-mindedness can be achieved must be created and cherished; constraints are, of course, a reality now and must be confronted in all planning. But to determine what the institution ought to be in the future requires the generation of a multitude of ideas by as many people. Constraints, however relevant or pressing, cannot be examined until the process has run its course. This is not to say that the questions posed by national and institutional feasibility should be ignored.²⁴¹

A cross-impact matrix is then completed in which constraints and policies are assessed.

The "futures creating" model promotes two important concepts. First, that trend analysis, while important, is not enough; the planning process must consider alternatives, the future may not be a reflection of the past. Separating trends from values calls attention to the fact that mega changes such as the Renaissance, the Industrial Revolution and the Space Age became "apparent" to different segments of society in a variety of ways and with time separation measured in years and even decades.

The second contribution stems from the model's approach to time as a planning variable with relevance both in a temporal sense and in a contextual sense as well. Planners using this model will not only select a focal point on the planning horizon for analysis, t_n , but will also construct the events and resources to reach that point from the precedent milestone, t_{n-1} , and through subsequent iterations construct a "critical" path back to the present. The "gap" between the resources available and the resources required to reach the initial milestone, $t + 1$, can be "managed" by changes to: the time variable; the resource allocation variable; or the objective. Carley refers to this relationship as time-budgeting and is hopeful that research in this area may lead to ". . . linking objective conditions and subjective response."²⁴²

The Oregon State Department of Education reports on a project which was directed at evaluating the potential use of indicators as an aspect of statewide assessment. While

this study was focused on elementary and secondary levels it has some significance for postsecondary education levels as well. The Cooperative Accountability Project began in April, 1972, and included Michigan, Oregon and five other States.²⁴³

Oregon's participation in the project, in part, was due to its timing. In 1971 the Oregon legislature had heard testimony concerned with establishing responsibility for desired outcomes of elementary and secondary education. Two positions emerged: one would limit responsibility to helping ". . . students acquire desirable skills and knowledge in basic subject matter."²⁴⁴ The second would expand responsibility beyond those limits to include ". . . how well students perform after graduation in such critical roles as wage earner, citizen, consumer."²⁴⁵ While no legislation was forthcoming, in 1971, interest continued to grow.

Results of the study included a working definition for the term indicator: "a description, in quantifiable terms, of the status at a specified point in time of a significant condition or variable which provides evidence useful for an analysis of progress toward a goal or objective."²⁴⁶

The researchers attached importance to three elements appearing in the definition of the term "indicator."

(1) The expression is quantifiable--data does exist, or can be collected, to show 'how much' of the indicator exists.

(2) The condition or variable that is described has, by general agreement, a relationship to the goal with which it is associated.

(3) The measurement is associated with a point of time.²⁴⁷

From these elements a set of specifications was developed for assessment indicators which required that they should be:

(1) related to agreed upon goals;

(2) derived from reliable and valid data;

(3) derived from data that will continue to be collected so that comparisons over time may be made and

(4) derived from data for which the measurement techniques have stability over time.²⁴⁸

The Oregon study produced four types of indicators; based on Carisle's typology, these indicators would be classified as informative:

Input indicators describe a condition or variable over which the school (institution) has some control and which affects the school's ability to achieve an instructional, management, or support goal.

Context indicators describe a condition or variable over which the school has little or no control. It affects the school's ability to achieve an instructional, management, or support goal.

Performance indicators describe a measurable or observable behavior or variable used to determine program effectiveness or efficiency. Data may concern: (a) student performance scores, or (b) a program variable such as instructional process or availability of learning experiences.

Societal indicators describe a measurable aspect of a social condition affected to some degree by education.^{248a}

The study lists numerous sources of data for indicators and describes a classification summary which, the authors assert, are indicative of an effort to move away from inputs as measures of schooling's success. The classification is divided into three phases:

Phase 1. Primary Effects

Product Consumption
Quantity
Quality

Investment
Income
Employment

Phase 2. Secondary Effects

Investment Feedback
Consumption Feedback

Phase 3. Tertiary Effects

Intergenerational Effects
(educational motivation of
children)²⁴⁹

Herriot divides the American education system into six levels ranging from nursery/kindergarten, at the lowest level; followed by elementary/secondary; postsecondary, non-collegiate; postsecondary, collegiate; graduate/professional, and adult education. He lists the properties of American education when viewed as an open sociocultural system and the indicator variables associated with each. This indicator typology is useful in that it complements the indicator categories noted earlier with both a general and specific environmental perspective, from the educational institution's point of view.

The institution's general environment consists of those objects and patterns of relationships that exist

outside an educational system at any level, but significantly influence or are influenced by it. General environment indicator variables include: labor force participation rates; source of funding; general U.S. population; public attitudes toward racial integration; public attitudes towards curricula emphases; judicial actions affecting education; public attitudes towards schooling problems; public confidence in educators; public attitudes towards educational expenditures, and manpower requirements of American industry. These variables can be grouped into the following indicator categories:

Science and technology indicators describe the state of knowledge pertaining to utilization through "tools" and "process" of the resources found in the institution's environment which may affect its ability to achieve one or more of its goals.

Economic indicators describe the state of values pertaining to utility through exchange or conversion of resources found in the institution's environment which may affect its ability to achieve one or more of its goals.

Demographic indicators describe the state of population variables or behavior found in a group's environment which may affect the institution's ability to achieve one or more of its goals.

Political indicators describe the state of governmental variables or behavior pertaining to incentives and sanctions which influence exchanges between individuals, groups and the institution which may affect the institution's ability to achieve one or more of its goals.²⁵⁰

The institution's specific or available environment consists of the following indicator categories and the indicator variables associated with each category.

Structure indicators describe the relatively stable patterns of social interaction which integrate the various elements of an educational system at any level. Indicator variables include: size of the organizational unit; degree of systemic differentiation; cost of access; authority relationships, and intensity of educational effort.

Cultural indicators describe sentiment, meanings and commitments which various actors (e.g. teachers, pupils, administrators) within an educational system at any level attach to its goals, activities and problems. Indicator variable: faculty involvement in work stoppages.

Output indicators include the knowledge, skills, and orientations required by the environment and possessed by students at the time they leave an educational system at any level. Indicator variables include: adult's highest educational level attained; youth and adult cognitive performance; youth dropouts; youth college plans; youth knowledge of the world of work; adult completion of college degree programs; adult years of schooling completed; graduate attitudes and youth occupational plans.

Throughput indicators include the raw materials (basically the students in attendance) which an educational system at any level operates upon in producing output for its environment. Indicator variables include: student enrollment status; student degree programs; student special needs; student minority status; student parental language; student violence; student previous education; student distance between home and college, and student motivation for attending school.

Input indicators include the materials (e.g. textbooks), personnel (e.g. teachers and administrators), and information (e.g. knowledge and values) imported by a system at any level from its environment and used to transform throughput into output. Indicator variables include: dollar expenditures; teacher sex; instructional staff salary; instructional services offered; instructional staff responsibilities; educational gross national product, and instructional staff authority.²⁵¹

A final typology of social indicators is provided by the Bureau of the Census in a tri-annual publication titled

Social Indicators III, published in December, 1980. This text reviews eleven groups of social indicators which are considered to reflect significant aspects of social concern or topics of interest. The indicators are basically descriptive and are of three broad types:

System performance which relates resource inputs to resource outputs.

Well-being which suggests relative, directional movement.

Public perception which presents subjective feelings regarding certain aspects of respondents' current condition, quality of life.²⁵²

The data for these publications were collected using sampling techniques and, therefore, are subject to sampling and non-sampling variability.

The indicator categories covered are: Population and the Family which lists seven (7) indicator variable groups, containing a total of twenty-three (23) variables; Health and Nutrition which lists six (6) indicator variable groups, containing a total of thirty (30) variables. Housing and the Environment which lists six (6) indicator variable groups, containing a total of twenty-one (21) variables; Transportation which lists six (6) indicator variable groups, containing a total of twenty-five (25) variables; Public Safety which consists of five (5) indicator variable groups, containing a total of twenty (20) variables; Education and Training which consists of six (6) indicator variable groups, containing twenty-five (25) variables; Work which consists of five (5) indicator variable groups,

containing a total of thirty-two (32) variables; Social Security and Welfare which consists of four (4) variable groups, containing a total of twenty (20) variables; Income and Productivity which consists of six (6) indicator variable groups, containing a total of twenty-nine (29) variables; Social Participation which consists of (5) indicator variable groups, containing twelve (12) variables, and Culture, Leisure and Use of Time which consists of six (6) indicator variable groups, containing a total of eighteen (18) variables.

The six (6) indicator variable groups for Education and Training reported in Social Indicators III were: public perceptions, three (3) charts; resource commitments, six (6) charts; enrollment and attainment, five (5) charts; performance and achievement, five (5) charts; adult education and training, three (3) charts; and international comparisons, two (2) charts. Each indicator variable group is covered by a brief, one page or less, narrative explaining the type and source of the data covered, and comparisons with prior periods in most cases.²⁵³ The indicator variables covered in the Education and Training section of Social Indicators III follow Herriot's output indicator variable category.

Social indicators hold much promise for planners, and one day indicator science, through the use of structural models, may materially reduce degrees of uncertainty regarding the anticipated behavior of target groups. In

most cases the science of social indicators has not yet been so fully developed; but that still leaves the art of social indicators, which, conceptually, is also a powerful planning tool. Spilerman describes the so called "hydraulic" model, which for certain groups may "characterize their rates of performing activities from a collection, in the sense that by removing the possibility of carrying out some, we raise the rates for others."²⁵⁴

Cross-impact studies, such as those suggested by the Resource Center for Planned Change using the futures creating model, allow planners to consider possible effects stemming from identifiable trends and hypothesized changes without the additional burden of understanding the reasons for the behavior. Van Alstyne, responding to a question concerning the use of indicators for educational planning urged: . . .

We cannot wait. While striving to develop more comprehensive conceptual frameworks for defining and interpreting indicators in postsecondary education, and while recognizing both the analytical and the political risks of misusing, or simple using, possible misleading data, we should go ahead trying to construct indicators from existing data, with the conviction that the active use of data is essential to improving the collection, processing, and interpretation of such data.²⁵⁵

Scanning

Social indicators deal with large segments of the general environment and thus create application problems for institutional planners attempting to relate that information to their organization's specific or available environment.

A technique described by Aguilar, which he labeled environmental scanning, may aid planners in interpreting information gleaned from environmental studies and their own organization's current operations, for policy formulation and strategic planning. The study covered one-hundred thirty-seven managers from forty-one companies located in the United States and six Western European countries. The purpose of the "research was to study what information managers obtain about the outside environment for purposes of determining strategy, the sources they use to get this information, the ways in which they get it, and . . . why they scan the environment as they do."²⁵⁶

Research techniques included interviews, examination of relevant company documents, communication devices and information storage and display devices. Each respondent was asked to cover the following topics during the interview:

1. To describe briefly his job, where he fits into the company's organization, and the organization or persons reporting to him on either a solid--or a dotted--line relationship.
2. To list and describe the various sources from which he gains external information and to estimate their relative importance to him.
3. To recall a number of specific recent instances of gaining external information and to specify the source and how he came to receive the information.²⁵⁴

Answers to the third topic formed the basis for a statistical survey. In addition to interviews and the statistical survey a situational analysis of scanning was

also conducted to determine how firms responded to selected situations requiring data gathering activities.

The need to look far into the future greatly broadens the environmental boundaries of search. Scanning must move farther and farther from the immediate environment of the company in search of basic trends. Emphasis must shift from the immediate areas in which the company competes to the industry as a whole, and thence to the aggregative and general economic, technological, political and social spheres. Each outward step multiplies the number of relevant factors and the volume of information to be considered. Each outward step introduces increasingly tenuous relationships.²⁵⁸

There are several problems which the organization committed to environmental scanning must face. It must be prepared to process voluminous data, from numerous sources, often incomplete, and always of questionable relevance. The latter, relevance, may be the more difficult issue to cope with. Two factors affect the scanner's ability to assess the relevance of data 1) his own knowledge of the organization's strategies and 2) his competence relative to the data and its source.

The issue of relevance can also be considered from the perspective of distortion. First, data could be considered relevant if it were known by the scanner to be distorted when he comes in contact with it; secondly, the scanner may inadvertently or with purpose distort the data. The possibility of inadvertent distortion is self-explanatory; motives for intentional distortion range from the scanner believing his role to be one of reducing organizational uncertainty, thus, reduces or eliminates

certain value laden aspects of the data, or finds it in his (or his units) best interest to filter and/or distort the data.²⁵⁹

Scanning may be divided into four modes. First, undirected viewing occurs when the viewer has no specific purpose but through contact intuitively discerns a change in the field which requires further investigation. A second scanning mode is conditioned viewing. This mode is in effect when the scanner is aware of an area of interest but is not engaged in an active search. The third mode, informed search, is similar to the second except that the search is active but unorganized. The final mode, formal search, is deliberate, follows a predetermine plan, and is aimed at securing specific information or information relative to a specific issue.

Aguilar found in his survey, companies tended to collect external information in five areas: 1) Market tidings, current activities in the market and the competitive field; 2) Technical tidings, relating to industry technology; 3) Broad issues, events occurring outside the industrial environment; 4) Acquisition leads, leads for acquisitions, joint ventures, and mergers; and 5) Other tidings, miscellaneous data. He considered the lack of interest in the Broad issues category "to be most discouraging to proponents of long-range planning--the more so when it is considered that thirty-nine (39) per cent of the survey respondents numbered among the high echelons of management."²⁶⁰

Major sources of strategic information used by managers surveyed were found to be distributed as follows: all Outside members 10 percent, includes customers and suppliers; all Nonmembers 17 percent, includes business associates; all Publications 27 percent, includes trade publications and newspapers; Other impersonal sources 2 percent; Subordinates 19 percent; Peers 8 percent; Superiors 1 percent; Others 8 percent; Internal reports 5 percent; and Scheduled company meetings 3 percent. Perhaps the two most interesting categories are: Superiors, which contributed only 1 percent of the time; and company meetings at only 3 percent. The low value attributed to company meetings could be explained by their generally having to do with current operations. In all, the vertical flow of strategic information was unimpressive. Diagrammatically, the merging of external and internal sources of strategic postsecondary education information could present the flow pattern shown in Table 2.1.

STRATEGIC INFORMATION SYSTEM

THE EXTERNAL ENVIRONMENT

THE INTERNAL ENVIRONMENT

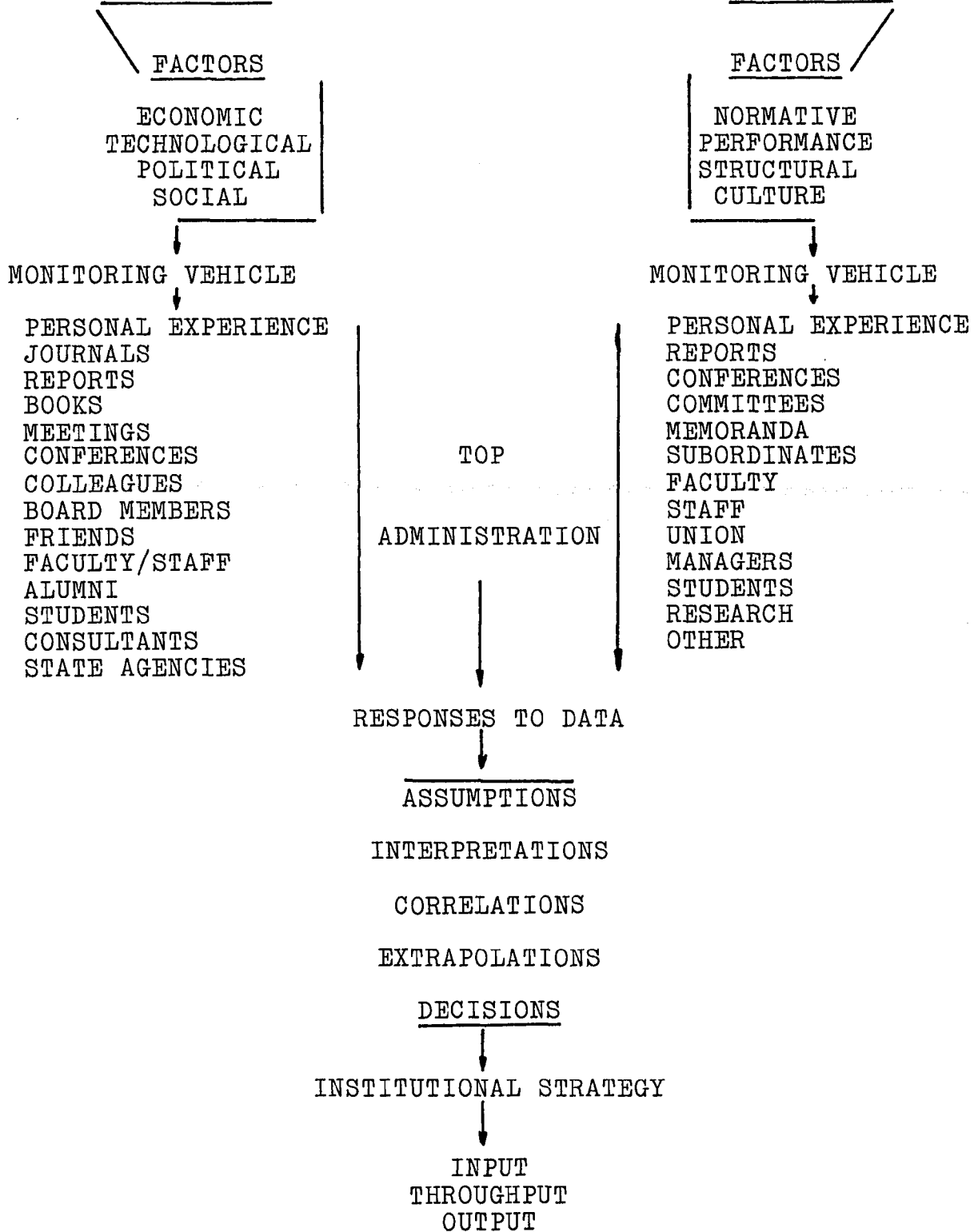


TABLE 2.1.

A final area of interest contained in the Aguilar study dealt with information/interest/influence relationships. The researcher concluded that ". . . the usefulness of a body or category of external information to the making of strategic decisions depends directly in some manner on a 'match' between the contents of the information and the interests of the executives making or influencing those decisions."²⁶²

Turning again to a chart to make the point, Aguilar describes a technique of diagramming the three key variables: content, interest and influence. Along the abscissa of the grid is depicted the executive's inward/outward (relative to the environment) orientation and his orientation to new/old business is depicted along the ordinate. Interest/influence characteristics of each executive are shown by his position (location) on the grid relative to other executives and the size (strength of influence) of the symbol chosen to represent his position. With the use of broken and solid arrows, lines of communication and changes in position on key issues can also be diagrammed.²⁶³

Techniques for recording information gleaned from the environment have also been reported by Wilson who asserts, "the salient characteristics of a good monitoring system are continuity and comprehensiveness."²⁶⁴ In Wilson's opinion the best self-operated system for monitoring the socio-political environment is managed for

the life insurance industry by the Institute of Life Insurance.

Again the familiar matrix form is used to describe the results of the Institute's trend analysis program. One axis lists categories of publications; environmental segments (social change, technology, etc.) are displayed along the other axis. Each participating company nominates a "Monitor" who is assigned a particular cell, and that individual then has responsibility to review a publication or class of publications for trends impacting that segment of the environment. Reports by monitors are analyzed by the system and the results are shared by all member companies.

Another technique described by Wilson is the probability-diffusion matrix. Its principal use is to provoke debate, but it also serves the added function of testing internal consistency for a variety of assumptions or predictions. Across one axis is placed a probability continuum ranging from low to high; across the other axis is a diffusion continuum ranging from high to low. All assumptions/predictions are then tested for consistency by placing them in the cells formed by the matrix.²⁶⁵

Still another technique suggested by Wilson and often cited by other researchers is the value profile. The chart is made up of contrasting pairs of values, e.g. conformity vs. pluralism, work vs. leisure, means vs. ends, etc. Two or more points in time may be represented for each set of values: 1983 (current) changing to another position

by say 1988 or some later period. Wilson cautions, "It is important to stress that the chart attempts to predict value change, not necessarily events."²⁶⁶

In this chapter the researcher has reviewed organization structure and its importance if the mission of an organization is to be achieved. Once the mission is well understood and a structure compatible with its goals and objectives is established, the next step, in the growth and development of the institution, is the formulation and implementation of policies which will serve to guide its members, as they employ resources in pursuit of specific objectives.

As indicated by the literature, these implements of action are not enough to ensure success. The institution must be ever mindful of the fragile relations which exist within the organization, internal climate, as well as those relations existing between members, collectivities, and coalitions representing, with varying degrees of force, the organization's interests in the external environment.

Aguilar studied a group of companies operating in the specific environment of the chemical industry using interviews and a survey; Wilson reported the findings of a continuous environmental monitoring system established by the General Electric Company in 1967. Each of these studies had as their principal interest the relation between a focal organization(s) and its organizational set, those individuals, collectivities and other organizations in

direct interaction with the focal organization. A different perspective for analyzing organization-environment relations is provided through a study conducted by Frey. The study had several objectives:

First, this was a case study, essentially exploratory and descriptive in nature . . . a second objective . . . was to make a contribution to organizational theory and to provide some direction for future research . . . since I do not hold the general environment as a "constant" as is usually done . . . thirdly, this study was designed to contribute to the knowledge of the university as a complex organization . . . Few conceptual comparisons have been made between the organizational characteristics of universities and those other organizational types particularly on strategic or policy-making levels. . . . Finally, the results of the study should be of some value to university officials, legislators, legislative staffs, and any others concerned with the operation and management of the institutions of higher education.²⁶⁷

Success is measured internally by the efficiency with which it transforms units of input into units of output; success, in terms of the organization's external relations is measured by the more nebulous yardstick, effectiveness. Frey in establishing the need for his study asserts, ". . . institution's must be able to assess the nature of their environment if they are to use it to their benefit. Effectiveness is contingent upon the development of a management strategy and an organizational structure which promotes adaptability to environmental contingencies on the one hand, and boundary maintenance--autonomy on the other. Despite the magnitude of this dilemma, little or no empirical research exists on university--environment relations."²⁶⁸

Frey concluded, after reviewing the literature on organization--environmental relations, that four themes were clearly discerned. First, that organizations could not avoid relations with their environments; secondly, such relations almost always result in transactions where resources are exchanged; thirdly, in an effort to ensure the uninterrupted supply of resources, organizations will attempt to control their environments, especially the specific environment; and finally, the number and significance of these transactions will determine the amount of autonomy or freedom of control the organization must relinquish.²⁶⁹

Frey, taking a somewhat different posture on the issue of autonomy, asserts ". . . It is the position of this study that engagement with the environment is a necessary condition for effectiveness, and in any transaction both parties give up some autonomy and not necessarily in equal proportions."²⁷¹ Further, evidence of loss of autonomy was indicated by the gradual usurption of decision-making through legislative activity.

The Washington state legislature, by virtue of its control of the budgetary process and its reliance on an enrollment based funding formulas, is moving closer to defining the parameters of strategic decision-making within the university.²⁷²

In an effort to offset legislative interference, the focal organization and other institutions included in its organization set, reacted by increasing their legitimation activities. The objective of such activities was to justify

their products (educational "goods") and the method was increased contacts (transactions) with both the general environment and the specific environment.

The general environment, as described by Frey, consists of political, ecological, economic and technological factors; the last factor, technology, was not a factor of concern in Frey's study. The political factor was of concern because it struck at the heart of the institution's functioning, autonomy and academic freedom.²⁷³

The autonomous functions of higher education: ". . . transmission of culture, the creation of new knowledge, the maintenance of experts in all fields and social criticism. . . ."274, have evolved over time to include universal education and service to community groups.²⁷⁵

This expansion of mission has tended to infringe upon autonomy as resources became more scarce. As the public joined the debate over the mission of educational institutions, ". . . there occurred a decline in the 'academic mystique' and a rise in the public's concern that higher education return to teaching the mainstream values"276

Frey found evidence of lowered levels of legitimacy and social approval for colleges and universities. The themes of public accountability and justification of existence was evident in many of his interviews. "They largely focused on efficiency and effectiveness with regard to the use of resources. But the demand was not only

financial accountability but also for social and cultural responsiveness."²⁷⁷ Frey asserts that a turn away from the four-year liberal arts program to one emphasizing vocational and technical education reflects this lowered legitimacy.

Another example, suggested by Frey, of the change in status of higher education vis. the general environment is the incidence of litigation involving colleges and universities. Such incidents range from defense of autonomy as in the case of The University of Michigan to Hobart College's indictment for tolerating coercive conduct on the part of certain student groups.²⁷⁸

Courts are likely to become more accessible and increasingly utilized by aggrieved members of the university boundaries by external agents and this means still another blow to the university's right to determine and control institutional activities.²⁷⁹

The Ecological factor of the general environment tends to highlight the growing importance of interorganization relations and the corresponding diminution of individual relations. Organizations control resources and through those resources control their environment; the amount of control they are able to exert depends upon the relative size of the resources controlled and their need to acquire more, in relation to other organizations operating within the same environment.

". . . organizational density, or the number of organizations per spatial or social unit, is important because it represents the presence of organizations of other institutional spheres who are in competition for resources with the units of the educational sphere."²⁸⁰

Frey in commenting on the Economic factor of the general environment considered two perspectives. First, the lower level of economic support, vis., bond issues for educational purposes suffering increasing numbers of defeats. Second, growing competition for a finite resource indicated further reduction in economic support for higher education.

Society has been able to endure this unusual rise in educational cost with no additional productivity because the demand was 'income elastic'. The public has both paid the price and increased the quantity of education demand . . . Now the demand is decreasing as is the amount of income available, resulting in less resources for higher education. Costs must be reduced to match this downward adjusting resource supply.²⁸¹

Frey found, as noted earlier, that legitimization activities were increasing, as were efforts to improve efficiency through resource-saving techniques, and improved coordination with other organizations in the specific environment. The increase in interorganizational exchanges is to be expected when one or more of the organizations is suffering from a reduction of its internal resource base. The dominant organization within the focal organization's network is the state legislature but interaction with it diminished with the creation, by the legislature, of the Council of Higher Education and the creation of the Council of Presidents, by the higher education institutions.

The Washington legislature created the Council of Higher Education to provide a coordinative function, and permit closer surveillance over the state's colleges and

universities. Further, use of the legislative budget committee also reduces the legislature's dependence on the Office of Program Planning and Fiscal Management for higher education budget interpretation. Each of these entities add to the university's visability, making its behavior more predictable and subject to control by others, especially the legislature. This, of course, leads to a significant power imbalance, one the higher education institutions have not been able to counter. Frey noted that both individual institution's and the Council of President's had been ineffective in reducing this power imbalance.

In sum, colleges and universities appear almost completely subject to the whim of the legislature. There are so many areas in which control can be exercised which makes it virtually impossible to be antonomous . . . With the advent of the CHE, the performance audit and the concomitant rising negative image of higher education, strategic or policy level activities are also, or will soon be, defined by external agencies, particularly the state legislature. Heteronomy, not autonomy, is the reality.²⁸²

If Frey's observations are accurate, and there is much in the theoretical literature to support the basis for his conclusions, as described in the preceding review of literature, it becomes apparent that a need exists for organizations to systematically evaluate their relations with the environment. In the past two decades many attempts have been made to use models, some more sophisticated than others, to quantify both internal/external environment and organization/collectivity/individual relations; strategic planning may offer a rational approach for institutions and

funding agencies interested in establishing a rapprochement to improve institutional images of both, in the matter of the public's perception of performance.

The Planning Product: Policy

In the first section of this review the focus was on the planning process; what it is; a brief history, and the direction it seems to be heading in-so-far as postsecondary educational institutions are concerned. The second section of this review attempted to describe the importance of matching organization structure and mission. The third section introduced the notion that organizations have a better chance of accomplishing their mission if they are aware of the forces that shape both the internal environment (organization climate) and the external environment.

In this, the final section of the review of literature, the researcher is concerned with policies/strategies designed by the organization to guide its members in the proper use of resources. These policies must reflect a thorough understanding of the organization's structure, its strengths and weaknesses; the dynamics of its available environment; the value shifts occurring or likely to occur in the general environment; and its own performance. This "understanding" must, to the extent possible, be codified, reduced to a specification, so that it is shared by members rather than fragmented, with each member or subunit "following" a separate, unguided version.

Three elements are necessary for such an information system to work: goals and their assessment criteria must be known by members, the level of detail should be consistent with the member's degree of responsibility for the outcome; regular performance reports must be produced; and the assumption's on which policies are based (for implementing actions to achieve objectives leading to agreed upon goals) must be documented and well know by all affected parties. Further, as goals and objectives are changed, so must policies and their underlying assumptions; or, at least reviewed to determine that changes are unnecessary. Conversely, as assumptions are added, modified or dropped so must the impact of these changes be reflected in the strategic plan, whether they stem from an inward-outward perspective as in the first case or from an outward-inward perception as in the latter. The key element in planning is assumptions.

Assumptions

Planning is a management function and therefore goes on wherever "managers" are located within the organization. Koontz and O'Donnell add, "Planning is a function of every manager, although the character and breath of planning will vary with his authority and the nature of policies and plans outlined by his superiors."²⁸³ Managers, at all levels, routinely contribute to the formulation of budgets which Koontz and O'Donnell consider a plan, "a statement of expected results expressed in numerical terms."²⁸⁴ The

budget, an annual plan, commits resources to prescribed activities, many of which produce effects which will spill-over into subsequent planning periods. These ripples spread out along the full length of the planning horizon, so that the actions taken by even the least senior administrator, contribute to the "futurity" of the institution's plan.

Another of Fayol's management functions is control and this assumes feedback, or the ability of the manager to assess results.

Performance criteria are often predicated on the expected presence or absence of influencing factors. For the manager to make proper judgments on the type and magnitude of corrective actions, he must be fully aware of all qualifying aspects of the criteria he and others use for evaluating outcomes. Assumptions represent, in concrete terms, the logic on which strategies are based; whether for setting departmental objectives reflected in an expense control budget; the "profit" targets of the entire institution, for the coming year; or, enrollment goals a decade into the future.

Assumptions provide the rational basis for operationalizing planning definitions, such as Ewing's:

A method of guiding managers so that their decisions and actions affect the future of the organization in a consistent and rational manner, and in a way desired by top management.²⁸⁵

According to Scott "It is fair to say that the appropriateness of any plan always depends upon the validity of . . . assumptions about the future."²⁸⁶ Developing

assumptions is a subsystem of the planning and control system.

In Anthony's framework, planning, as a function, is found in each of his topical areas: strategic planning; management control, and operations control. For instance, he includes budgeting as a management control activity. If planning is found in each of these management areas and assumptions are, as Scott asserts, a vital element in the planning process, are they used differently in each application area?

Assumptions, like objectives, usually emerge as the result of analysis; only a few are fixed and settled from the start. Therefore, making assumptions can be thought of as a complete subprocess in several stages within the main planning process. The nature of the analysis used in developing these assumptions varies widely, ranging from emphasis on quantitative forecasts to emphasis on qualitative factors to reliance upon intuitive presuppositions.

Assumptions provide a vehicle for bringing a variety of management levels and functions together and facilitating the understanding of the organization's objectives and goals. In contributing to strategy formulation through this assumption development process, individuals are also able to close the gap between the institution's goals and their own, if a gap exists.

Assumptions provide the cement which holds the planning process together. All levels of management and many technical areas as well are able to contribute, in this way, to the budget formulation, and through that process understand how achieving its near term objectives is a necessary step toward the organization's long-term goals. According to Scott, there are many alternative methods for developing assumptions:

1. 'Imposed' assumptions. Some assumptions are imposed by . . . top management. The planners do not need to take time to investigate these assumptions further: they are 'givens' in their planning task and can be accepted without question.

. . .

2. 'High probability' assumptions. In any plan there are a great many underlying assumptions which can be made with a high degree of confidence, based upon past experience. . . .

3. 'Irreducible uncertainty' assumptions. There are some subjects which have a substantial degree of uncertainty. Attempts to analyze these subjects quickly reach a point of diminishing returns beyond which further analysis is not fruitful. . . .

4. 'Previous information' assumptions. Since any company which undertakes this kind of long-range planning activity is a going concern it is bound to have accumulated studies of many subjects, and some of their findings prove most useful to planners in developing assumptions.

5. 'Planning analysis' assumptions. Finally, there are those subjects which demand special investigation by the planners in order to develop assumptions, a category accounting for most of the planners' activity in this phase of forecasting.²⁸⁷

The ability to distinguish between these types of assumptions is extremely important in strategic planning. The planner must guard against accepting potentially important assumptions on superficial evidence; or using

assumptions which are not well documented, this is to ensure that the planner or any other person working on the plan will know its basis and source.

Just as there are different types of assumptions, so are there different stages in their development:

1. Initial assumptions are developed early in the planning process, and their main purpose is to provide some basis on which the planners may work. Some . . . are imposed by top management: . . . Other[s] . . . can best be characterized as conditional or preliminary: . . . Some of them are high probability assumptions, but others are quite uncertain, . . .

2. Working assumptions are developed during the course of planning analysis. As with the establishment of objectives, various assumptions are seen as relevant only after some planning analysis has been carried out.

3. Final assumptions are those which are incorporated in the written presentation of 'the plan' in its completed form. . . . They are not intended to provide a compact summary of the innumerable assumptions made during the course of the planning process, . . .²⁸⁸

Final assumptions are usually selected by planners with both the user and his/her needs clearly in mind. It is essential that the user have a thorough understanding of the basis for each final assumption so that he/she is able to judge when and to what extent the plan should be qualified, modified or even abandoned. Users feedback performance data, relative to the plan; planners (staff) feed-forward changes in assumptions, to users who must then decide if changes to the plan are required.

Planning assumptions are frequently organized into three major subject area categories for strategic planning:

general environment; industry environment; and factors of production.

1. 'General environment' assumptions. . . . about political, social, economic, scientific, and technological factors are all likely to have an important impact in determining the eventual strategy. . . .

Assumptions about the general environment are not simply projections of the past. Since changes are not noticeable from day to day, the present environment is liable to be viewed as permanent. However, important discontinuous changes are taking place; . . . Second, the challenges which general environment assumptions present to the planner are generally challenges of adaptation. Rarely can a company hope to influence significantly any of these assumptions. The assumptions are designed to set the boundaries within which the company operates; the company has to recognize their dimensions and organize its activities accordingly. Third, companies are aided in their quest for information about general environment subjects by the growing number of management service organizations.²⁸⁹

2. 'Industry environment' assumptions. In the term industry environment the word 'industry' includes concepts of product line, process and product mission. A company, in drawing up strategic plans, needs to take special account of (a) expected changes in competitive relationships with an industry and (b) anticipated developments of a technical, distributive, and organizational nature within that industry.²⁹⁰

The significance of this category is: 1) the way in which progress in one area is frequently dependent upon commensurate progress in supporting or related areas; and 2) there is a need for sensitivity to the potential of peripheral items or awareness of possible relationships between existing activities and newly emerging changes in the "industry" environment.

The Leontief input-output grid is a technical aid used by business to carry out this type of analysis. It could also be used by postsecondary educational organizations as an aid in making assumptions about both the "industry" and the "general" environment. This model could compile information in a grid which indicates sources and quantities of inputs contained in specific programs, as well as the volume of outputs and ultimate success of graduates. It could also reveal the relationship of one segment of the education economy to every other segment, and enable institutions to learn which segments of the general economy are dependent upon its "products," and to what extent.

The last of the "subject" category of assumptions, refers to the availability of capital, material and manpower availability and quality. Planning analysis dealing with assumptions is most often directed toward subject areas which are external rather than internal to the institution. Often, top management imposes assumptions relative to factors which are internal to the planning institution.

3. 'Factors of production' assumptions. . . . important to developing strategic long-range plans treats the availability and the quality of factors of production. This is to say, certain assumptions are needed about capital availability, material and equipment availability and quality, and manpower availability and quality.²⁹¹

Koontz and O'Donnell suggest that premises (assumptions) may be divided into three groups:

1. Uncontrollable. There are those planning premises that are noncontrollable, in the sense that the individual institution doing the planning cannot do anything about them. . . .

2. Semicontrollable. Then there are those planning premises that may be regarded as semicontrollable, in the sense that the individual firm cannot control them but can influence their happening to a greater or lesser degree. . . .

3. Controllable. Among these are those policy matters and programs that the company management can decide largely for itself. ²⁹²

In sum, planning assumptions must be considered from a variety of perspectives by the planner: 1) the method(s) for developing assumptions: 2) the stage of development any given assumption may be at: 3) the subject area to be considered, and 4) the amount of control or influence the institution will be able to exert.

Uncertainty is the final aspect of planning assumptions to be considered in the development of this strategic planning discussion. Some perceive planning as a means of controlling the future. In the realm of long-range planning, however, this is almost always unrealistic. The planner has to live with and deal with uncertainties which exist now and which will continue to exist.

Uncertainty . . . is said to be present, when the experiment in question cannot be carefully replicated by (or upon) other persons or at other times or places; that is when the situation is unique. Its frequency distribution, therefore, cannot be objectively specified. . . .²⁹³

A further tendency is to conceive of planning as simply a means for minimizing risk. This is an orderly concept which has utility in certain quantitative approaches to planning. Nevertheless, it is not fruitful as a generalized way of thinking about planning. The planner often needs to be more concerned with being sure he is

taking the right risks, even though this can be in many ways a more difficult task.

To qualify as a risk situation, then, an experiment must be repetitive in nature and must possess a frequency distribution from which observations can be drawn and about which inferences can be made by objective, statistical procedures. . . .²⁹⁴

Scott, in his analysis of uncertainty tends to use the terms uncertainty and risk interchangeably. "Uncertainty is never completely absent from planning activities. Business is a risk-taking activity, and uncertainty is a fundamental fact of business life."²⁹⁵ Farrar's differentiation, for the purpose of this dissertation has far more utility. For instance, Scott speaks of the possibility of reducing uncertainty, using Farrar's distinction this amounts to a nonsequitur. It is extremely important for planners to clearly separate risk assumptions from uncertainty assumptions.

. . . one should inquire as to the usefulness of nonobjective information which may be available. That is, should no objective information about an event's probability density function be equated to no information about it, or should a decision maker's ideas about the probability of an experiment's alternative outcomes, that is, his subjective probability distribution, be treated as though it were of equal importance to its objective counterpart? If not, how should such information be treated? Should it be discarded altogether?

One's whole outlook on the problem of decision making under uncertainty turns crucially upon his answers to the preceding questions. Two paths diverge sharply at this point. He who chooses not to accept the legitimacy of subjective probability can proceed via the route of game theory, whereas he who will do so is likely to seek the problem's key in the realm of statistical decision theory.²⁹⁶

Knight addressed the problem of uncertainty reduction by suggesting:

1. increase the accumulation and study of existing data;
2. average out uncertainties by relying on large-scale organizations and
3. try to control some aspects of future developments²⁹⁷

Farrar would argue that Knight was addressing risk, not uncertainty. However, it is true that further study and accumulation of data will aid in defining the problem, or aspects of it, as one reflecting conditions of uncertainty or risk; objective or nonobjective information.

This distinction between risk and uncertainty, objective and nonobjective data, raises the issue of quantification of data. Scott makes an important observation regarding the unwarranted attribution of certainty to information:

In developing assumptions about the future, in so broad an undertaking as strategic planning, arbitrary figures are frequently used to provide approximate bench marks. This is both useful and necessary in many circumstances, but problems may arise if the figures subsequently have greater certainty attributed to them than their original means of development justifies. Because a strategic plan serves as a basis for many supporting planning activities, an error of this kind may have a multiplier effect upon the institution as a whole and produce adverse consequences.²⁹⁸

Scott suggests the use of a weighting scheme to indicate a probability distribution for the various assumptions dealing with each problem/opportunity or scenerio. The danger is that these figures will

subsequently be misinterpreted to imply an exactness which is not in fact justified, or a reduction in uncertainty when in fact no such reduction has been achieved.²⁹⁹

If objectivity is the key to risk taking, then flexibility is the hedge to uncertainty. Scott has identified three aspects of the future which he argues demonstrate a need for flexibility in strategic planning:

first, the future itself is always clouded in uncertainty;

second, a large part of the environment of the future is not controllable by an individual organization and

third, it is certain that the future--whatever its form--will differ in a great many ways from the present³⁰⁰

Given these three "facts," Scott concludes that long-range planning decisions should be formulated on a sequential basis, where possible, and not as a one time, go no-go commitment. Flexibility, then, takes on two different aspects, each significant in strategic planning:

built-in flexibility includes contingencies for 'what if' occurrences and

deliberate-postponement flexibility allows certain actions to be delayed while others move ahead on schedule.³⁰¹

Flexibility is a key strategy; yet, its value must not be diminished by excessive patronage. As noted earlier, flexibility is a hedge to uncertainty; nevertheless, effectiveness can only be achieved through decisiveness and promulgation of values. Flexibility when employed to excess is manifest to the organization's publics as ambivalence. Scott suggests:

First, lip service to the need for flexibility can sometimes cover up a lack of courage or an indecisiveness on the part of top management. . . . Second, incorporating flexibility into a decision is sometimes uneconomic. . . . Finally, there can be excessive preoccupation with flexibility which results in continued revision of strategy. . . .³⁰⁴

Someone once said, "Strategy is when you are out of ammunition, but keep right on firing so that the enemy won't know." Occasionally, budget requests reflect more of this brand of strategy than the classic one of choosing from several alternatives a near optimal way to utilize scarce resources, in an effort to reach an organization's objectives. Stating this idea in problematic form, the first condition might reflect an individual's objective, protecting his job; the second, saving the jobs of many by keeping the organization viable.

Assumptions permit closure, even if artificial it allows a large segment of management to "see" the organization's goals, and strategies selected for achieving them. With this knowledge, it may be easier for individual managers to reach an equilibrium between their individual needs and aspirations, and those of the organization. They, it is hoped, will find in this rapprochement a "climate" where each individual member clearly understands the goals of the organization and finding them to be consonant with his own goals recognizes that contributing to one, enhances the possibility of achieving the other; could this be management by objectives in old clothes?

The planning theory necessary to manage the rapid growth in demand for educational goods, occurring in the 1950s and 1960s; the trauma of social unrest and disobedience during the same period and extending into the 1970s; and the declining demand expected, and in many cases already experienced, in the 1980s and 1990s, was available to educational leaders. Unfortunately, the press for coordination by politicians and some educators was running a parallel course, and the term autonomy became a code word for intransigence and the resulting organizational entropy, in many institutions, could not support new strategies.

Drucker (1980) elaborated on an earlier definition (1959) of corporate planning by adding emphasis to strategy: ". . . making present entrepreneurial (risk taking) decisions systematically and with the best possible knowledge of their futurity, organizing systematically the efforts needed to carry out these decisions, and measuring the results . . . against the expectations through organized, systematic feedback"³⁰³ is a continuous process in long-range planning; twenty-one years later he added:

Planning tries to optimize tomorrow the trends of today. Strategy aims to exploit the new and different opportunities of tomorrow. . . . Any institution needs to think strategically what its business is doing and what it should be doing. . . . Typically, businesses--but even more, non-profit public service institutions--believe that a strategy that aims at 'a happy medium' is most comfortable, least risky, and adequately profitable. They are wrong.³⁰⁴

Should the educational organization develop a formal long-range, strategic plan; organize a formal planning

function; and institutionalize a process of continuous reviews, revisions and publications? It may be that many institutions experimenting with planning concepts have attempted to do just that. Even Trickton's case subject appeared to create such a plan; however, that case suggests this was done on an ad hoc basis rather than through a formal planning entity.

The major problem appears to be one of organization, but this is misleading. The confusion arises from the emphasis of most planning definitions on the term continuous, and the implied scope of the planning process. Comprehensive plans, maintained on a formal and continuous basis are just not practical for most institutions. Reacting to this incongruity in an exiguous manner by paying lip service to planning, or ignoring the function altogether, is equally unrealistic. The answer to the problem lies in Drucker's definition; ". . . making entrepreneurial decisions. . . ." with an emphasis on "strategy."

Industry has long been aware of the need to relate product worth to product cost. In the 1940s, Lawrence Miles developed a technique for accomplishing this on a micro analytical basis, it is known as value analysis. Carlos Fallon (1964) offers a somewhat simplistic, but accurate definition:

Value analysis/value engineering is a functionally oriented scientific method for improving product value by relating the elements of product worth to their corresponding elements of product cost in

order to accomplish the required function at least cost in resources.³⁰⁵

The application of this technique, first to the planning function problem, and subsequently to institutional planning problems, requiring strategic analysis, could provide a solution for the organizational question of establishing a framework for rational planning and control. Assumptions, as this review has demonstrated, can provide the substantive linkage for incrementally including/excluding planning topics of importance to the strategic management/planning process.

Periodic, comprehensive review of long-range strategic plans is probably necessary at most institutions. However, planning resources should be committed, on a continuing basis, for only those carefully selected, vital projects or programs requiring current review. In this sense, one or more planning packages may be subjected to continuous analysis; the mix of topics and projects being determined by the needs and interest of top management, the resources for this analysis should be recruited from all areas of the institution, as needed.

Only one aspect of strategic planning, assumptions, should be continuously reviewed and amended, as necessary, by the planning staff. This process will, of course, help management assign priority to the various planning projects, maintaining a balance between the planning resources and the strategic planning needs of the institution.

Policy

The product of planning is policy. This review of literature has covered the planning process, beginning with early theoretical development and concluded with strategic planning methodology. Both the organization and its environment combine to form the planning context, the real world as it were, where planners must function. The product of this labor, using the planning tools available to them, is policy. This section of the review of literature deals with the process of policy formulation, which occurs once the investigative phase of planning has yielded information and assumptions necessary for decision-making.

Autonomy is a property of organization and, as such, is an integral part of its value system. It is also the focus of a continuing debate between postsecondary educational institutions and state regulatory and funding agencies. A crucial question is how does the issue of autonomy manifest itself in the planning process: as policy, as a goal, or as a myth which restricts the decision-making process? If policy, on what goal is it focused; if a goal, how will its achievement lead to fulfillment of mission? If a myth, how does it influence planning assumptions and can it obfuscate performance? Another way to frame the question is to ask, is autonomy an object of action; the impetus for action or a source of inertia?

Goal was defined as ". . . a set of circumstances sought in pursuit of the mission."³⁰⁶ It would seem this

definition would exclude autonomy as a goal for most postsecondary educational institutions, if the position of Anthony and Dearden on the mission of nonprofit organizations is accepted; ". . . the goal of a nonprofit organization is not to widen the difference between outputs and inputs. Rather, its goal is to render as much service as is possible with a given amount of resources . . ."307

Policy is defined by Thompson and Strickland as, ". . . the organizational methods, procedures, rules, and administrative practices associated with converting the strategic plan into results. . . . Whatever the scope and form, the managerial thrust of policy is to set organizational mechanisms in place that will support strategic success."308 This definition reflects a hierarchical dichotomy advocated by the authors, which distinguishes between decision implementation, policy, and organization purpose, strategy. (In both management and organization literature the terms are frequently used interchangeable.) It is clear, then, autonomy is not a policy as narrowly defined by Thompson and Strickland.

It is also unlikely that a convincing argument could be made for autonomy as a strategy, if, one is willing to accept the general systems concept of open/closed organization structure. Absolute autonomy precludes boundary exchanges between the autonomous entity and every other organism. The organization with absolute autonomy is a perfectly closed system, experiencing no exchanges across

its boundaries and permitting no autonomy for parts or subparts within its boundaries.

On the other hand, autonomy is relative, it is a measure for determining the strength and directionality of influence exerted between two interacting organisms; each relationship may be described in terms of dominance. The dominant member gives up less autonomy in effecting the transaction than the other member; when more than two organisms interact, as in an organizational set, each pair of members will establish such a relationship. The eventual shares each interacting member will retain after the transaction, can be forecast on the basis of which member has accumulated the greatest amount of information concerning the other. The member controlling the vital resource(s) will give little information and demand a great deal. In this sense autonomy is a surrogate for measuring dominance, the impetus for action, and could be properly called a policy or a strategy according to Thompson and Strickland; but for what purpose?

Strategic planning, as has been noted, leads to decision-making or choosing one course of action as superior to other alternative (includes the option of no action) actions. The elaboration of that choice, plan, is policy formulation; the final step in the strategic planning cycle. Policy implementation, is the first step in the management control cycle, using Anthony's continuum.³⁰⁹

Ewing offers a dichotomy for evaluating policy based on the decision-maker's perspective: outside-in; inside-out. He suggests that some policy-makers reflect an outside-in approach rationale.

As Theodore Levitt observes in a famous statement of marketing philosophy: 'an industry begins with the customer and his needs, not with a patent, a raw material, or a selling skill!'³¹⁰

Applying this notion to an educational setting would suggest working back from the mission of teaching students, to the selection of teachers possessing the correct skills and values, to the maintenance of adequate facilities in the proper location. In classical economics such an organization would be characterized as a need taker.³¹¹

Outside-in thinking always emphasizes fitting the organization to the market or public need, adapting to anticipated opportunity, responding to external change. Its trademark is the primacy of the forecast.³¹²

De Greene describes this type of organization as adaptive. He suggests that modern organizations should be thought of as dynamically interacting subsystems consisting of social, technological, psychological and political components.

Maintaining congruence or fit between the organization and its environments has emerged as probably the single most important function of top management. Maintaining fit cannot be done without anticipating changes in the internal and external environments and in the organization-environment interrelationships.³¹³

The type of interrelationships De Greene describes fully involves the focal organization with its environment, through boundary spanning roles assigned to a variety of functions and levels within the organization.

Applied to organizations the structures, equipment, personnel, techniques, functions, plans and actions that handle organization-environment interactions are referred to as boundary-spanners.³¹⁴

As these boundary-spanning roles are performed, information concerning each of the interacting organizations is exchanged, and the bargaining chip, according to Frey, is autonomy.³¹⁵

The other perspective offered by Ewing is the inside-out approach.³¹⁶ Policy-makers reflecting this rationale assume their organization exerts some measure of influence over the specific environment. Further, they would tend to emphasize differences between competing organizations and their relative strengths and weaknesses. This strategy is decidedly market oriented in the sense that the environment can be manipulated or enacted.³¹⁷

. . . The inside-out approach . . . leads to different results from outside-in because of the different role assigned to forecasting. It also leads managers to place different priorities on the information-gathering process so important in strategic planning; information about organizational strengths and weaknesses, instead of being a kind of check or limiting factor, as in outside-in, becomes a crucial starting point which sets the whole tenor and scope of strategic analysis. . . . inside-out will lead management to search more intensively . . . for alternative goals and programs.³¹⁸

The inside-out approach suggests continuity of the organization is more important than which mission or goal-set is central to that existence. However, this approach also includes boundary spanning roles, in fact, they may be more critical in this approach than under the outside-in rationale. Managing information flow is pivotal for both

the exercise and avoidance of influence resulting from interactions between organizations.

What information is available about organizational actions is the outcome of a political process in which social actors, each trying to advance its interests, attempt to acquire or withhold information as it serves their position in the political struggle.³¹⁹

This, then, is the problem facing postsecondary educational institutions: opt for an outside-in approach (traditional) and take what the environment will offer; or, elect an inside-out approach and attempt to adapt the organization to the most favorable market position through a combination of matching organizational strengths to the environment, and influencing the environment to make the organization more effective in utilizing its available resources. However, in each case, some autonomy is sacrificed; or conversely, a dominate position will be achieved by one of the interacting parties. Further, if the second alternative is selected, the organization also risks loss of legitimation as it changes its mission or role to ensure continuity.

This problem is faced by all members of the organization set, including regulatory and funding agencies. Frey's case study provides an example where the policy of autonomy to achieve dominance by one segment of postsecondary educational institutions resulted in the policy revealing itself as a myth; with the added problem, described by Emery and Trist, occurring when a type four, turbulent, environment is treated as a type two, placid, environment.

Frey describes the creation of intermediary organizations by interacting members of the higher education organization set in the State of Washington. One such organization, the Council of Higher Education, (created by the State Legislature) reduced the information gathering contacts of the individual institutions with individual legislators and demanded specific information. The President's Council was created by the institutions to limit the information flowing to the legislators and provide a more efficient vehicle for collecting information for member institutions. Each of these intermediary organizations, however, once established, retained some autonomy from their transactions, and the evolving specific environment became more complex and turbulent; these additional mediating organizations served to make the environment more tightly coupled.³²⁰ Both the President's Council and the Council for Higher Education could be expected to selectively withhold information in an effort to establish and maintain some degree of autonomy for themselves.

One of the inherent dangers in over-centralized planning and direction in a system is the tendency of the central governing or coordinating agency to instigate uniform policies as controlling devices Thus, the most defensible stance for the central leadership is decision-making through broadly uniform policies and procedures. Not infrequently, however, institutions find that conformity to such rigid policies is at cross-purpose with good management practices.³²¹

Glenny, more than thirty years ago listed increasing complexity as a reason for coordination of higher education.

Even when political maneuvering did not influence legislative action, the determination of the relative needs of a complex university, a land-grant institution, and other colleges required information too voluminous and technical for legislatures to gather and interpret. As a partial solution, numerous states began to centralize the control of some if not all of their institutions.³²²

Glenny also noted that economic considerations were responsible for many states moving toward some form of coordination; as was the public's demand for greater efficiency and less bickering between institutions.³²³

Dunbar noted, "The need for performing certain of these functions recently has been recognized by the Michigan Council of State College Presidents. A voluntary agency has been created and has been provided with a staff for this purpose."³²⁴ The functions he alluded to were listed in a report by Russell,³²⁵ which included many of the concerns enumerated by Glenny. The Michigan Community College Association; the Association of Independent Colleges and Universities of Michigan; and the Michigan Organization of Private Vocational Schools were organized to serve essentially the same purpose, improve the level of member legitimacy and effectiveness as perceived by their various publics.

In 1973, after more than a year of work, a task force appointed by the Education Commission of the States reported its conclusions and recommendations on coordination, governance and structure of postsecondary education. The task force agreed that, "The states have pre-eminent responsibility for postsecondary education."³²⁶

It further endorsed the concept of diversity; recognized a period of leveling-off or decrease in the traditional college-age population, along with other social and demographic change; and listed the basic characteristics for ". . . an effective coordinating agency or governing agency charged with statewide planning . . ."

1. Broadened responsibility for the range of postsecondary education--public, private and proprietary--at least in relation to planning . . .

2. Concern for education innovation and new forms of educational 'delivery' . . .

3. Concern for articulation with

a. State departments of education . . .

b. Career and occupational education . . .

c. The various segments of what has been considered higher education . . .

d. Individualized learning, home study, proprietary education and nontraditional studies

e. Other educational enterprises including industry, business, labor and the armed forces.⁵²⁷

The task force also recommended that where multiple statewide agencies exist, they should be coordinated by a central agency, and each state should determine levels of authority and responsibility and develop state plans consistent with that authority. The task force concluded that planning and implementation were the key to effective coordination and governance:

1. Two critical objectives for the planning process must be pursued simultaneously:

a. To determine the goals of postsecondary educational systems and the institutions and programs in the light of the changing needs of society

b. To use the planning process for continuous review to establish, through institutional and community involvement, a consensus for the goals and their means of attainment

2. A flexible advisory structure assures that relevant information and advice will be received on a continuing basis

3. Essential to effective planning are an accurate and consistent assessment of current trends and changing conditions, and the reconsideration and reassessment of the means of attaining goals in the light of those changes.³²⁸

Finally, the task force concluded that the legislative and executive branches of state government should support planning and coordination through an appropriate state educational agency and the role of the federal government should be one of partnership with local, institutional, and state interests. To achieve this partnership the task force urged ". . . Congress and the Administration to develop federal legislation and guidelines for postsecondary education that take account of the uniqueness of individual states. . . ." ³²⁹

The task force suggested that the state educational agency assigned the coordinating function ". . . be accountable to the state government for planning, review and related procedures and for recommendations requiring legislative and executive action." ³³⁰ Further, that institutions should be free of pre-audits but subject to ". . . post audits to determine that institutional and

program objectives and proper fiscal management have been achieved."³³¹ Finally, "The state agency should be a primary, comprehensive and objective source of information and recommendations for the executive and legislative branches of government. . . ."³³²

The task force expressed the belief that if its recommendations were followed, both the agency and the institutions would be strengthened. Of course, the environment of the organizational-set would become more tightly coupled, the number of contacts along boundaries would be increased, and domination would be transferred from the legislature to an administrative intermediary, separating the institutions from the resources they require for survival.

Palola and Padgett look at the autonomy issue in terms of politicalization. They suggest the trend toward increased politicalization is likely to continue. First, the rapid and pervasive growth of education during the 1950s and 1960s resulted in greater visibility. States had to create or at least increase existing staff to accommodate if not control the growth. With this growth ". . . has come a new conception of public higher education as an integral part of society subject to the same pressures and procedures as any other state service."³³³

Second, organizational climate has eroded. The sense of community which shrouded faculty was removed, revealing coalitions and/or powerful individuals taking

their case for special programs and interests directly to funding agencies and the legislature, "What has become much more visible to state officials and to the general public are the various groups within the institution all struggling to promote their own interests, often at an expense to the citizens of the state."³³⁴ In some cases politicalization has been institutionalized with public relations offices and/or officers ensconced in the state capital to ensure effective communication.

A third force, evidencing politicalization is the militancy exhibited by both faculty and student groups during the 1960s and early 1970s. "In addition to student activities, faculties have formed unions and in some cases engaged in strikes to promote by political means their own interests."³³⁵

Fourth, the importance of an educational institution or branch campus to a community, especially in economic terms, has not gone unnoticed by legislators seeking to solidify a power base or a candidate seeking a constituency. "Not only is the spread of new campuses vital to the vested interests of certain politicians and communities, but it also reflects the growing awareness of education as an investment in future economic health."³³⁶ Of course, a new campus brought with it increased educational opportunity for those students unable to afford the expense of living away from home.

A final reason offered by the authors for increased politicalization is due to higher education's role in contemporary problems. As colleges and universities become more involved in urban and environmental issues their contact with local, state and even federal agencies has increased; other areas include ROTC programs, affirmative action, and military research.

Each of these activities has expanded the traditional boundaries of higher education, created more awareness by its publics and clients of mission, and more dependencies. Education's organizational set is both more tightly coupled and more vulnerable in a turbulent environment.

The increased politicalization of higher education has several consequences for autonomy in educational planning . . . because this period has been one of great growth . . . educators have been willing to accept certain local and state controls regarding budget approval and program formulation. In most cases, colleges and universities accepted these new procedures, showed great flexibility in their operations, and developed in directions most appropriate to their own objectives. These efforts resulted in substantial improvements in academic autonomy even though legally and formally institutions have lost some of their traditional independence. 551

Glenny (1959) and Palola and Padgett (1971) do not share a common view of autonomy with Frey (1977) or Terrebarry (1968). Researchers sharing the view of Frey and Terrebarry would argue that autonomy is negotiated and represents one characteristic of a relationship between two organisms engaged in a transaction; those sharing the position taken by Glenny and Palola and Padgett would argue

it is a "right" defined in contractual terms. Of course, each position has been defended and both groups cite evidence to support their claims. The key point for this dissertation rests in Palola's and Padgett's statement ". . . as the degree of interdependence among organizations increased and the rate of social change accelerated, organizations were forced to become sensitive to, and learn how to deal with, their environment in order to protect their autonomy and in some cases to guarantee their very existence." However, the position of Frey and Terrebarry would argue that some of these organizations did trade some portion of their autonomy for survival.³³⁸

The Palola and Padgett study suggests that a turning point in theory application, at least as it applied to higher education, occurred during the late 1960s and early 1970s. "A rigid formal hierarchy and stable rule system are now often dysfunctional features of complex organizations. Thus a new approach, called the 'open-systems strategy' has developed to meet the problems posed by rapid social change and environmental influences."³³⁹ Unfortunately the promise of this approach has not been realized by many postsecondary educational institutions.

Conclusion

This is not a summary of the material covered in the review, for after all that was both a summary and a synthesis. This, the concluding part, of the review, is simply a restatement, in a bit more detail, of the

introductory comment which described the framework for the review of the literature.

The researcher's purpose in designing this review was to establish both a theoretical and, where possible, empirical basis for the research to be described in chapter three. The review covered three broad topics: Planning; Organization; and Environment. Each subject was analyzed using the variables: structure, strategy and performance in a postsecondary educational setting.

The topic planning included the subjects of: theory; budgets; long-range planning; comprehensive/master planning; strategic planning; assumption formulation; policy formulation and implementation.

The topic organization, included the subjects of: theory; structure; mission, role and scope; performance, including efficiency and effectiveness; goals and objectives; boundary; boundary spanning roles; and domain.

The topic environment, included the subjects of: organizational climate; specific environment; general environment; social indicators; and environmental scanning.

These topics, subjects and analytical variables provided the ground for the figure, autonomy. In this context it was demonstrated that autonomy is more a myth than fact; that conventional wisdom practiced by postsecondary educational institutions wishing to protect "autonomy" has failed, and those regulating and funding agencies also desiring to protect their autonomy actually

saw it erode, in those states which introduced coordinating agencies; the additional structure simply added to the turbulence already pervasive in the environment. It would appear that statewide coordination, or the threat of such an agency has produced more losers than winners.

Michigan, one of very few states to grant its state colleges and universities constitutional autonomy, is an excellent test bed for determining if the immunity from coordination has produced a viable network of operating institutions with well defined planning systems; or, if they too have failed to develop, voluntarily, viable planning techniques, as have institutions subjected to the additional turbulence created by the presence of coordinating agencies. If that is the case what untried alternatives are left to improve the ability of postsecondary education institutions to develop strategies for delivering their valued products and services in a turbulent environment, and continue to enjoy the academic freedom, if not the autonomy, they require to maintain a high level of quality?

The first step, of course, is to determine the potential for a coordinated planning effort by members of the postsecondary organization set. This is the major thrust of the research reported in this dissertation. If, the research suggests that institutions are planning effectively then only a coordination model needs to be developed; if, on the other hand, planning is marginal or poorly defined then a planning model will also be required.

In no case, however, given the concepts presented above, should a coordinating/organization solution be given priority.

The thesis of this dissertation is that adding structure to an already turbulent environment will not produce more diversity or quality in educational goods. What is needed is a vehicle for gaining congruence between members of the educational set, which includes the legislature, on the nature of those educational goods, their distribution and cost. Once this is accomplished, along with development of simple performance criteria, the institutions through their own initiative could find zones of effectiveness, niches, for mission focus. Concurrent and commensurate with the institution's independent effort, the legislature should enact policies which would, through a system of incentives and penalties, provide the organization set both coordination and thrust to meet the needs of its publics and clients. The argument is well stated by Cyert:

The major problem in planning is, of course, the lack of market prices and Professor Fox argues (in Chapter 10) for substituting weights as estimated by the relevant administrator to units of various outputs as a substitute for a pricing system. Conventional techniques can then be used to determine an optimum allocation of resources, given the weighting scheme. I have some sympathy for this approach, but I think that it is not sufficiently sophisticated. I believe that the whole problem of determining these weights is the central consideration the solution of which is lacking not only in most universities, but also in many profit-making organizations. The decisions involving the internal allocation of resources in a firm pose exactly the same problems as decisions determining the allocation for a university; one problem is the inability to determine the benefits

from allocating certain resources to particular kinds of activities--advertising being one example. More generally, I am arguing that a major problem in making planning more quantitative is the determination of the goals of the organization. In universities, in particular, we lack knowledge on how to determine a set of goals and priorities. Without such a set of goals and priorities, the process of resource allocation is one that is political. The resources allocated to a particular output depend on the kinds of influence that can be asserted by various administrative officers making the allocation decisions. Thus an allocation of resources is made that is not related directly to either the value of output in the market or the goals of the institution. Even the procedure recommended by Fox might still fall into this category because the weights might be determined politically. . . .

. . . one of the major factors that is untouched in the book is the need for more elaborate information systems than currently exist within most universities. We need to have better cost data and better means of searching the environment for trends and changes in the values of various potential outputs of the university in both education and research.³⁴⁰

Models, with solution potential, are described in the recommendations chapter of this dissertation.

The following chapter describes a research strategy for inventorying the planning attributes of postsecondary institutions located in the State of Michigan. Since exploratory and descriptive methodology was employed, no research hypotheses were developed. The theory and empirical evidence presented in literature reviewed in this chapter will serve as the basis for analysis and comparison, if required.

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³Charles Perrow, Organization Analysis: A Sociological View (Monteray, Ca.: Brooks/Cole Publishing Company, 1970), p. 14.

⁴J. Kent Caruthers and Melvin Orwig, Budgeting In Higher Education (Washington, D.C.: The American Association for Higher Education, 1979), pp. 6-7. The authors cite various positions held by other authors on this issue, including Pyhrr and Wildavsky.

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⁶Definitions reflect the work of the following authors cited in Caruthers and Orwig, *Ibid.*, pp. 36-54: Incremental Budgeting Caruthers and Orwig; Formula Budgeting, James L. Miller, Jr.; P.P.B.S., Kenworthy; Zero-Base Budgeting, NACUBO; and Performance Budgeting, Allen Schick.

⁷*Ibid.*, p. 33-34.

⁸David W. Ewing, ed., Long-Range Planning For Management (New York: Harper and Row Publishers, 1964), p. ix.

⁹Sidney G. Tickton, *Ibid.*, pp. 505-523.

¹⁰Preston P. LeBreton and Dale A. Henning, Planning Theory (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1961), p. vii.

¹¹*Ibid.*, p. viii.

¹²*Ibid.*, pp. 3-21.

¹³*Ibid.*, p. 10.

¹⁴For the complete list see p. 43.

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²²Hopkins and Massy, Ibid., pp. 340-382.

²³Hopkins and Massy cite reviews of education related models by: Paul Gray, 1976, "College and University Planning Models," Paper read at the Conference on Academic Planning sponsored by University of Southern California; Richard C. Grinold, David S. P. Hopkins, and William F. Massy, Bell Journal of Economics 9 (1978):396-420; Richard C. Grinold and Kneale T. Marshall, Manpower Planning Models (New York: American Elsevier, 1977); Robert M. Oliver, Analysis of Public Systems eds., A. Drake, Ralph L. Keeney, and P. M. Morse (Cambridge, Mass.: The M.I.T. Press, 1972); Roger G. Schroeder, "A Survey of Management Science in University Operations," Management Science 19 (1973):895-906.

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²⁵Jan Tinbergen and H. C. Bos, Economic Models of Education (Paris, France: Organization for Economic Cooperation and Development, 1965). Also see Jan Tinbergen, Stefan Jensen and Barry Hake, Possible Futures of European Education (The Hague: Martinus Nijhoff, 1972).

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³¹Ibid., p. 200.

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CHAPTER III

METHODOLOGY

The researcher's purpose in this study was to inventory and compare planning attributes of institutions belonging to four traditional postsecondary education groups: state colleges and universities; community colleges; independent colleges and universities and proprietary schools. The study was both exploratory and descriptive. Survey methodology was employed to collect data utilizing two types of mail questionnaires. Theoretical constructs were developed from the planning literature to develop the questionnaires and analyze the data.

The survey method in general and the use of mail questionnaires in particular were chosen over alternative data collection methods for the following reasons:

1. Cost: The population selected for the study consisted of 162 institutions. While all of the institutions were located in the State of Michigan, more than 500 miles separated the extreme sites.
2. Time: Respondents indicated that the questionnaire required several hours to complete; interviews covering the same areas of interest would require

more time and the sessions would have been conducted in series rather than parallel where the questionnaire permitted each institution to work toward completion in a more or less simultaneous manner.

3. Detail: Many of the questions required thoughtful consideration and/or review of records; both demanding more time and facilities than is usually available during an interview.
4. Bias and interviewer errors: While the study may have suffered from ambiguity of terminology (some planning terms have more than one meaning attributed to them) it also benefited by not having an interviewer intervene with textured definitions reflecting local knowledge, picked-up during the interview and which could not be explicitly repeated for every case.
5. Timidity: Many of the institutions indicated they were involved with the implementation of new planning methodologies or techniques, others were only in the exploratory stage of making a decision to use some form of planning methodology. Interviews could have had an intimidating affect on personnel who could not show concrete evidence of planning products.¹

Questionnaires were sent to 162 postsecondary institutions in the State of Michigan. This represented 100

percent of the thirteen state colleges and universities; 100 percent of the twenty-nine community colleges; 100 percent of the fifty-four independent colleges and universities and 37 percent or 67 of the 182 proprietary schools. Institutional listings for each group were taken from the 1982-83 Michigan Postsecondary Admissions & Financial Assistance Handbook published by the Michigan State Board of Education.

The four groups, then, represent postsecondary education in the State of Michigan, as evidenced by the categories found in the handbook described above; this typology is also manifest, adding another degree of formality, by the state associations with which many of these institutions are affiliated. The first group, state colleges and universities, with 13 autonomous institutions is represented by the Presidents' Council of State Colleges and Universities whose membership also lists the chancellors for the two University of Michigan branch campuses located at Dearborn and Flint. The second group, community colleges, with 29 institutions, is represented by the Michigan Community College Association, counting 26 as members. The third group, independent colleges and universities, is represented by the Association of Independent Colleges and Universities and 34 of the 54 institutions surveyed are members (the membership roster actually lists three locations for Davenport College of Business and three locations for the University of Detroit,

identifying separately the Schools of Law and Dentistry). Finally, the fourth group, proprietary schools, numbers some 186 institutions and 67 of the larger organizations are represented by the Michigan Organization of Private Vocational Schools. Many of the proprietary schools are extremely small, the staff, for instance, may be limited to the owner or members of the owners' families.

These "natural" groups were useful to this study in a variety of ways, two of the more important are worth mentioning. First, the director/president of each association was willing to support the study by allowing his name and the name of the association to be mentioned in the cover letters accompanying the surveys. Secondly, these groups provided a realistic basis for comparison (other possible typologies included mission, size, location, age etc.) Voluntary participation by the institution was considered to be a strong indicant of a community of interests which would be important in any study aimed at comparing group planning attributes on the one hand, and defining the potential for voluntary coordination of planning on the other.

Data Analysis

Since the study was both exploratory and descriptive, methods for data analysis were limited to descriptive statistics, such as, measures of central tendency and measures of variability. The number of useable responses to the various questions, by group, is an

indication of the extremely small values encountered. It seemed appropriate to select analytical treatments which were consistent with the complexity of the data; Table 3.1 shows this relationship:

	<u>PUBLIC COLLEGES</u>	<u>COMMUNITY COLLEGES</u>	<u>NONPUBLIC COLLEGES</u>	<u>PROPRIETARY SCHOOLS</u>
MOST RESPONSES	Q1	Q1	Q1	Q1
N=	8	11	20	6
FEWEST RESPONSES	Q7	Q7	Q3B	Q3B
N=	3	8	9	2

TABLE 3.1

Rankings were established using a weighted average method. Questions 5 and 6 asked respondents to assign a number from "1"- "4", with "1" having the greatest value, for each planning resource listed for each segment (there were three) of the planning horizon. The number "0" was recommended when the resource item did not apply to a certain segment of the planning horizon. The weighting system, when used to calculate relative values, consisted of multiplying the number of responses for each cell by its value: The response "1" was assigned the numerical value "4"; the response "2" was assigned the numerical value "3"; the response "3" was assigned the numerical value "2"; and the response "4" was assigned the numerical value "1". No penalty was imposed for "0" or blank responses. The value

in each cell was aggregated by planning resource type within groups and then summed to yield a combined weighted average (C.W.A.) for all groups.

Question 5 dealt with the utility of each planning resource for each segment of the planning horizon, sources were not compared to each other.

Question 6 dealt with the influence of each planning resource, sources were not compared directly by the respondent but were selected based on the frequency of planning assumption suggestions.

Procedures

The four groups surveyed represented 57.7 percent of the State's 282 postsecondary institutions and 100 percent of the "higher education" segment listed by the Michigan Board of Education: four-year state colleges and universities; independent colleges and universities; and community colleges.

The survey was conducted in two flights. The first flight was mailed to the presidents of the 162 institutions. Contents of this mailing included a cover letter describing the purpose and value of the survey. This letter also noted sponsorship by the director/president of the association the President's institution was either affiliated with, or, if not a member, one that s/he would recognize as representing, in some way, its general interests. Along with the cover letter the mailing also included a brief questionnaire. The purpose of the questionnaire was twofold: to identify the

general status of planning at each institution; and to name the person who would act as survey coordinator in the event the institution's president was unable to perform that function. To further encourage the return of the preliminary questionnaire a stamped, addressed envelope was also included; 78 presidents responded.

First Flight Results

	<u>Public Colleges</u>	<u>Community Colleges</u>	<u>Nonpublic Colleges</u>	<u>Proprietary Schools</u>	<u>Total</u>
Presidents Contacted	13	29	53	67	162
Replies Received	8	19	34	17	78
%	62	66	64	25	48
Agreeing to Participate	8	17	25	14	64
%	62	59	47	21	40

Table 3.2

The final results of the first flight (see Table 3.2) were encouraging; however, one follow-up letter was required. It was sent to those institutions which did not respond within four weeks from the date of the first mailing; and generated more than one-third (27) of the 78 replies eventually received. Most of the planning research reviewed for this study relied on interviews as the principal method for collecting data, and for that reason it is difficult to compare the response results of this survey with those reviewed.

One planning study, conducted by Toyohiro Kono,² used a mailed questionnaire. Kono's purpose was to compare long-range planning methods used by United States and Japanese companies. He mailed questionnaires to 152 U.S. companies and received 26 replies (a response ratio of 17 percent); 536 Japanese companies received questionnaires and 74 responded (a response ratio of 13.8 percent). The Michigan survey response ratio was somewhat better than Kono's with 48 percent, but private organizations, especially Japanese companies might be expected to be somewhat more reluctant to share sensitive information than educational institutions accustomed to requests for information of the type contained in the postsecondary education survey. The response by the proprietary segment of 25 percent is probably more comparable with Kono's results.

The second flight of the survey was mailed to the persons named as survey coordinators by the presidents. It contained a comprehensive research instrument and a cover letter explaining, in general terms, how the questionnaire should be approached and invited questions, should any arise, on topics which were not adequately covered by the instructions contained in the survey instrument. The questionnaire included eight questions, some with multiple parts. All of the questions, except for two, were of the closed-end type; the exceptions required very brief responses, consisting of two or three words or numbers.

The primary instrument was constructed and pretested with the assistance of planning/institutional research personnel at three of the surveyed institutions; only one of the persons participating in the development and/or pretest activity actually completed a research instrument for his/her institution. The pretesting was followed by pilot tests of the finalized form to determine time requirements and data sources. This revealed that the time necessary to complete the instrument was significant and resulted in the decision to suggest to the institutions that a coordinator should be appointed so that more than one person could participate in assembling the data. Because of the length and complexity of the instrument, a great deal of follow-up, including telephone calls and reminder post cards, was necessary to achieve the return ratios finally attained. The survey was initiated November 10, 1982 and closed March 15, 1983; forty five usable questionnaires were returned, details of second flight responses are described in Table 3.3.

Second Flight Results

	<u>Public Colleges</u>	<u>Comm Colleges</u>	<u>Nonpublic Colleges</u>	<u>Prop. Schools</u>	<u>Total</u>
Surveys Mailed	7	18	25	14	64
Surveys Returned	7	11	21	6	45
%	100	61	84	43	70

Table 3.3

Research Instruments

The survey instruments were of two types: a preliminary questionnaire designed to provide a self-report on the general status of planning systems implemented by postsecondary educational institutions in the State of Michigan. This instrument was sent to the presidents of 162 institutions and asked that s/he select from five statements, one which most nearly matched that institution's interest in strategic planning:

1. This institution has implemented a strategic planning process.
2. This institution is in the process of preparing or implementing a strategic plan.
3. This institution is evaluating the benefits of strategic planning.
4. This institution has no interest, at present, in strategic planning.
5. This institution does not require, a strategic plan.

The term "strategic planning" was selected over other terms, such as, simply, "planning," or "long-range planning" because it is the broadest in scope of the various types of plans, and, for the president who might not be up-to-date on planning terminology, its connotation is the least restrictive and provided a good match with the prevailing mood of many educators in the State of Michigan. The prevailing educational climate is one of urgency, in an

environment many believe to be threatening, if not intimidating and not conducive to any type of planning. One president captured this despair:

For years I occupied planning positions in R & D as well as V.P. for Academic Development and Coordination in a multi-campus system. Now, as President in rather unpredictable times, I find the old tools don't work so well and the new ones emerging are completely without merit, except to the consultants who try to peddle them. Each institution has to look at its reality, both exogeneous and endogeneous, and work out its own destiny, step by step, never locking itself into long term assumptions, lest the entire planning superstructure crumble.

The purpose of the preliminary instrument was to encourage a positive response to the planning inquiry; to establish a starting point for the survey which included the maximum number of institutions engaged in some type of planning, regardless of how informal and discontinuous it might be. One concern was that institutions actually engaged in some form of planning might respond negatively if the definition of planning was restrictive.

The second instrument was a more comprehensive questionnaire. The purpose of this instrument was to reduce the global responses elicited through the preliminary questionnaire to specific areas of inquiry which were both discriminating, using the planning variables described in the following section of this chapter, and exploratory, hoping to identify education indicators used by institutions in the development of their plans.

The first question was designed to start with a familiar planning subject, budgeting, and determine which of

several types the institutions' used. This question also explored the concept of futurity in decision-making by asking if the budget reflected commitments for periods less than, equal to, or greater than the budget period. Finally, several parts of the question explored the planning style of the institution and organization of the planning function, probing issues such as: linking the budget with long-range planning; and identifying the types of documents typically produced by those processes. The principal thrust of this probe was to determine if these processes were controlled by one function responsible for both long-range planning and budgeting, or if these two planning processes were the responsibility of separate functions.

The second question was concerned with organization and dealt with the existence and size of the central planning function and its location in the organization's hierarchy; asking the respondent to identify the level where the function was positioned, as well as the level to which it reported. The second part of this question was concerned with the decentralized planning organization; if one existed did it function on a formal, as opposed to an ad hoc basis? More specifically, were unit and subunit personnel assigned planning tasks as part of their job/position description? The third part of the second question looked at the planning organization in terms of its planning policies: by type of plan and function; planning horizon for each type of plan or function; age of the current plan(s) and frequency

of plan revision. This information provided some insight into the scope of the function and its work load. The relationship assumed, was that organizations with many types of plans, requiring frequent revision, and covering a broad planning horizon require more units of planning resources than organizations with less active planning demands.

The third question complemented the second in terms of manpower requirements and turn-a-round time required for plan revision. This question dealt with mechanization of the planning function(s). The first part of the question was concerned with file organization and data management. The second part of the question focused on type of hardware used for planning and, if proprietary software was available, which vendor supplied and supported it. The relationship to organization was also straightforward, the more powerful the planning system, the higher the potential planning output per unit of planning personnel.

Question four addressed the level of detail each type of plan contained. Again, the question assumed a straightforward relationship, the more data processing power and personnel, the greater the organization's planning expectation might be. This question did not address quality of the plan, only volume of planning detail and corresponding work. Five types of plans, with from three to six levels of detail choices, and a planning horizon with three time frames provided the reporting matrix.

Question five dealt with planning style. The first part of the question looked at the type and level of importance attributed to outside planning resources. Eight resource categories were listed along with provision for write-in choices. These categories covered both the immediate and the general environment. Each respondent was ask to identify those sources used by the organization and the segment(s) of the planning horizon they were especially competent to address. The second part of this question looked at the internal planning resources used by the institution. Seventeen different functions or categories were listed with provision for write-in choices. The response matrix also included three planning horizon segment choices for each resource category. The instructions called for each resource category and time frame to be rated; this was accomplished by indicating the level of emphasis the institution placed on each resource type and that part of the planning horizon the resource was most qualified to address.

Question six investigated the institution's use of planning assumptions. Five types of assumptions were presented: part A dealt with the type, organization structure, and offered a choice of four categories of planning assumptions. The first category "societal" dealt with integrative issues; next, "normative," referred to pattern-maintenance issues; the third category, "context," described adaptive concerns: and the last category,

"performance," offered a goal-attainment selection alternative. A time frame rating was required for each of the three segments of the planning horizon, indicating where this type of assumption was most viable. A third selection was required from a list of twelve assumption sources, both internal and external, which were frequently called on to contribute planning assumptions for one or more of the institution's six functional planning areas. The problem for the respondent, then, was to match one of the assumption categories with a frequently used planning resource and rate each segment of the planning horizon in terms of emphasis for each of six different functional planning areas of the institution. Parts "B," "C" and "D" followed the same procedure, except the type and category of assumptions changed. The list of sources and segments of the planning horizon remained constant through the first four parts of the question.

The assumption type for part "B" was general environment, and offered four categories of planning assumptions to choose from: "science and technology," "economic;" "demographic;" and "political." The assumption type for part "C" was "specific environment" and offered five categories of planning assumptions to choose from: "structural," which referred to the internal environment or organizational climate; "cultural," which also referred to the internal environment; "input," referred to the external resources required by the institution; "throughput,"

referred to the internal environment; and "output" assumptions, described the market conditions for the "educational goods" produced by the institution, and referred to a domain or the external environment. The assumption type for part "D" dealt with the institution's planning perspective: inward-outward vs. outward-inward. Two categories of planning assumptions were available to choose from for this assumption type: "trend" assumptions, indicated a reactive perspective and "paradigm" assumptions reflected a proactive perspective.

Part "E" of question six utilized the experience of participating institutions as a basis for defining education indicators. The assumption types used in parts "A," "B," "C" and "D" were repeated and the respondent was asked to match each of them with one of four indicator choices: informative; predictive; problem-oriented; and program-evaluation. The "informative" category reflected general trends or tendencies in one or more segments of the general environment. The "predictive" category was more concrete and dealt with trends occurring within the specific environment of the institution. The problem-oriented category also referred to the specific environment, it focused on one or more of the institution's domains, and was effectiveness oriented. The "program evaluation" indicator category was oriented toward the internal environment and focused on resource allocation issues and performance in terms of efficiency.

Question 7 looked at futurity as a planning process variable, it dealt with the macro concept of mission. Nineteen different goal categories were listed along with the three familiar segments of the planning horizon, to form a response matrix. Responding institutions were requested to assign a value to each segment of the planning horizon indicating the relative importance of the goal category for that future period. The goal mix of an institution was considered an indicant of management style, the segment of the planning horizon with the greatest emphasis was an indicant of planning style.

Part "A" of question eight dealt with the futurity of five specific performance indicators:

1. Retention. The ratio of new students to graduating students is one indicant of the holding power of an institution.
2. Effectiveness. The institution's ability to attract the desired number and quality of students is a referendum on its effectiveness. As an institution flexes values to maintain a planned level of enrollment, the flex direction is an indicant of effectiveness.
3. Growth. The relationship of FTE students to total students is a management variable, and reflects on the administration's decision to optimize the relation of efficiency and effectiveness variables.

4. Efficiency. The ratio of cost per student credit hour is one measure of efficiency. One of the institution's largest cost elements is faculty salaries. The ratio of student credit hours to total faculty is one indicant of efficiency (reduction of slack).
5. Flexibility. The ratio of FTE faculty to tenured faculty is an indicant of flexibility.

The aggregate effect of these five structural elements may also reflect on issues such as organizational climate.

Part "B" of the eighth question dealt with the institution's ability to attract and manage the resources necessary to maintain a steady state. The response to this question indicated both changes in level of expected resources and mix of sources providing those resources. As the institution relies more on "market" sources and less on benevolent sources, for funding, flexibility and planning will become more important, and uncertainty will increase. As appropriations, state, local even federal become more important the institution will be forced to exchange autonomy for resources. As research and auxiliary funding gain importance, so will the influence of special interests. The level and mix of funding are sensitive indicators of institutional control. The farther into the future the institution is willing and able to plan, the greater will its control be over both funding and personnel resource variables.

A planning model was used to develop the survey instruments. The model's components and the planning variables are described in the following section; model components and planning variables are illustrated in Figure 3.1.

Planning Model

Surveys have, in the past, been labeled as positivist, a term which Kolokowski reduced to four main elements:

- (i) the rule of phenomenalism, which asserts that there is only experience and which rules out all abstractions be they of matter or spirit;
- (ii) the rule of nominalism, which asserts that words, generalizations, or abstractions are linguistic phenomena, and do not give us new insight into the world;
- (iii) the separation of fact and value;
- (iv) the unity of the scientific method.³

Positivism suggests to some a "sinful" boundary for the researcher to avoid; yet, one is also reminded "the key to the correct use of survey data to provide corroborative evidence of a causal process is in the adoption of a model."⁴ Somewhere within these vague perimeters the pragmatic approach utilized by this study was isolated and developed; certainly the concepts of Glaser and Strauss⁵ were influential, as were those of Catherine Marsh.⁶

While this study used survey methodology to collect data through mail questionnaires, the researcher's sole purpose was to take an inventory of "facts" concerning the

status of planning as opposed to "opinions" of what the status should be. A difficulty with this assertion, however, stems from the need for a certain theoretical framework underpinning the questions. The point, nevertheless, is directed at disavowing any claim of science as a defense for the methodology selected. Simply put, the study was interested in finding answers to the questions: do postsecondary educational institutions plan; if so, are their methods ideosyncratic, or are there similarities in the selection of planning methods characteristic of the group to which the institution belongs; or, are these methods endemic of postsecondary institutions in general? The answers to each of these questions is vital in resolving, or making recommendations leading to the resolution of the argument between advocates for statewide planning organizations and institutional autonomy.

The fact that a model was used to develop the questionnaire should not be taken as a priori evidence of inferred causality. If the model helps other researchers to establish causal relationships between any of the planning variables that contribution will be serendipitous. The model's purpose here was simply to aid in the development of an approach aimed at gleaning answers to the questions noted.

Planning Variables

1. Organization. The first, and perhaps most important, variable is organization. Organization as used in this

context refers to both the way the institution is organized and to the presence of: a centralized planning organization; a decentralized planning organization under the direction of a small central planning staff; or totally decentralized planning, without the aide of a central planning function.⁷ Organizational structure, as a design characteristic, of the institution must be compatible with the organizational design of the planning function or it is unlikely to be effective. One design is not intrinsically better than any other, but it must be congruent with the overall organization structure. In addition to the structural characteristics of the function, other design considerations include: the level within the organizational hierarchy where the activity takes place; and the level responsible for its performance. A second design consideration is participation: how many functions and levels are included within the organization? and how many planning resources external to the organization are included?

2. Planning style. Even with a supportive organizational design there is no guarantee of the existence of planning or the quality of planning. Lahr conducted a study to analyze the presence of formalized long-range planning at 20 independent colleges and universities in the state of Michigan.⁸ The data reflected a range of formality, with lack of definition representing one

extreme and a well defined, comprehensive approach at the other extreme; formal vs. informal. Another dimension can be added to Lahr's, and that is one of strategy. Here the dichotomy distinguishes between selective strategic planning vs. comprehensive strategic planning (by definition, all planning is not equally strategic).

3. Type of plan. The literature includes in the generic term, plan: policy, budget, operational, tactical, long-range and strategic types. These are not mutually exclusive designations--institutions could and do select more than one type of plan as important to their organization, but frequently do not include all types. These discrete plans may over-lap, and often are developed, implemented and maintained by different units or functions within the same organization. Other institutions have attempted to integrate several types of plans; for example, policies, budgets, and long-range plans. The dichotomy here is discrete vs. integrated.
4. Functional focus. Postsecondary educational institutions typically include many, but not necessarily all, of the following functional activities as important in carrying out their mission: academic, of primary importance; followed by service and research; pecuniary and physical resources are represented by finance and facilities and/or operations functions. The interest in and level of emphasis directed at these functions

provides a focus for looking at both individual institutions and groups. Community colleges are expected to be less interested in research than comprehensive universities and more interested in maintaining a broad array of services than independent colleges and universities. Functional focus, as a planning variable provides several dichotomies; outward-inward, or inward-outward management perspective; homogeneity vs. heterogeneity management styles, and goal congruence in the form of efficiency vs. effectiveness.

5. Time. Time is manifest by the planning horizon and reflects foresightedness. Concentration on the 1-3 year segment is both fatalistic and reactionary; concentration on segments ranging farther into the future reflects a more proactive - deterministic management philosophy. It also indicates a more open structure, reflecting the institution's confidence in its ability to "enact" its environment.
6. Planning focus. This variable in some ways is similar to functional focus in that it too is concerned with an inward-outward, outward-inward management perspective, not in terms of discrete functions but rather in a holistic sense. It deals with organizational climate from the outward-inward perspective and interaction with the external environment from an inward-outward perspective. Further, there is a component of

foresightedness in terms of the environmental elements included: the active (immediate) environment and/or the general environment.

7. Environmental scanning perspective. A full perspective takes in all of the environmental segments: economic, political, scientific/technical and regulatory. It also includes both the active and the general environment. A partial perspective takes in one or more but not all of the environmental segments. It too includes both the active and the general environment for those segments of interest. A limited perspective includes one or more of the environmental segments but limits its concentration to the active environment.
8. Strategic orientation. The eighth and final planning variable is strategic orientation. Here the question is, will the future be an extrapolation of the past, reflecting continuous patterns in the institution's interactions with its external environment and a steady state in organization climate? or, will value shifts create discontinuities? The orientation dichotomy is trend vs. paradigm.

Model Components

In addition to the planning variables which operate on the planning model, the model itself has components or elements. The elements include: mission, goals and roles; performance, both efficiency and effectiveness; domain(s); assumptions; policies and resource allocation subsystems,

budgets, programs and activities. The planning model information flows between the elements is shown on Figure 3.1. The relationship between the planning model and the survey instruments are shown in Tables 3.4a, 3.4b and 3.4c. Table 3.5 operationalizes the model.

In Chapter IV the researcher presents the findings of this research and interprets the data using the terminology, theories, constructs and notions found in the literature. The research instruments were also developed in the same manner. In each case, choices were necessary, and it is possible, therefore, that more viable approaches were available or certain areas more important than those incorporated in the survey instruments and/or the interpretation of the data collected. The review of literature found in chapter two presented several of these alternative analytical arguments for each of the planning variables selected for this study.

PRELIMINARY INSTRUMENT

Planning Variables*

Questions (check one)	ORG	STY	TYP	FC	TM	PF	ESP	SO
1. This institution <u>has</u> <u>implemented</u> a Strategic Planning Process.	X		X					
2. This institution <u>is</u> in the process of <u>preparing</u> or <u>implementing</u> a Strategic Plan.	X		X					
3. This institution <u>is</u> <u>evaluating</u> the benefits of Strategic Planning.	X		X					
4. This institution <u>has</u> <u>no interest</u> , at <u>present</u> , in Strategic Planning.	X		X					
5. The institution <u>does</u> <u>not require</u> a Strategic Plan.	X		X					

Table 3.4a

Planning Variable Abbreviations*

ORG: Organization

STY: Planning Style

TYP: Type of Plan

FC : Functional Focus

TM : Time (planning horizon)

PF : Planning Focus

ESP: Environmental Scanning Perspective

SO : Strategic Orientation

Table 3.4b

PRIMARY INSTRUMENT

Planning Variables*

Questions	ORG	STY	TYP	FC	TM	PF	ESP	SO
1 Links between budgeting and long-range planinng	X	X	X		X			
2A Central planning organization	X	X						
B Unit planning organization	X	X		X				
C Institutional planning			X	X	X			
3A Mechanization	X		X	X				
B Hardware/software	X		X					
4 Level of plan detail	X	X	X	X	X			
5A Outside resources used for planning	X	X	X	X	X			
B Internal resources used for planning	X	X	X	X	X			
6 Assumptions: (Type)								
A	X			X	X	X		X
B	X	X		X	X	X	X	
C	X	X		X	X	X		X
D	X	X		X	X	X		X
E						X	X	X
7 Goal evolution					X	X	X	X
8A Personnel trend data					X			X
B Funding trend data					X			X

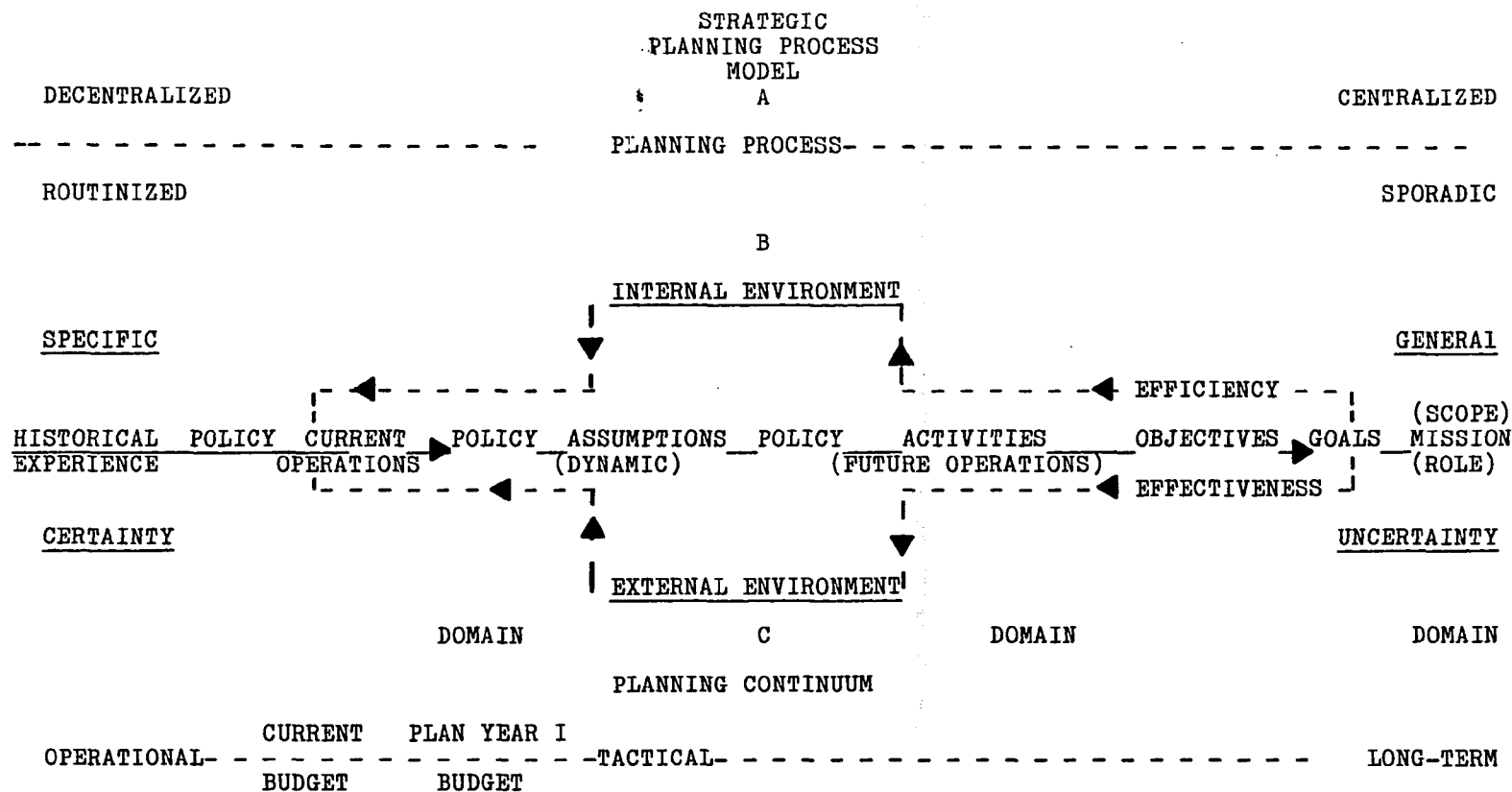
Table 3.4c

Operationalizing The Model:

Continuum "A" represents the notion that strategic planning is a relative concept; that is, as goals and objectives cover increasingly broader areas of the institution; and as those expanding objectives are more influenced by exogenous variables, and increasingly higher levels of management become involved; and as the futurity of decisions impacts increasingly more distant planning horizon points, so raises the level of "strategic" planning.

Continuum "B" represents the input-output flows of information; the planning processes, the resulting strategy modifications. This planning process could represent the entire institution; a unit; or, a discrete "package" or project with strategic implications. The emphasis is not on pervasiveness, but rather on integration where the futurity of a planning decision for an area or project extends beyond the budget period.

Continuum "C" represents the temporal aspect of the integrated planning modules. Long-term could be two or three years, perhaps even less time; tactical could be five to ten years, and operations could extend beyond the current fiscal year. The temporal nature of the planning subject controls positioning on this continuum.



ORGANIZATION VARIABLES FOR HOMOGENEOUS ORGANIZATIONS

- POSIT #1: AS THE EASE OF ENTRY/EXIT TO AND FROM "EDUCATIONAL MARKETS" INCREASES, THE PLANNING PROCESS WILL BECOME LESS CENTRALIZED AND MORE FORMAL.
- POSIT #2: AS RESOURCE LIQUIDITY INCREASES, THE PLANNING PROCESS WILL BECOME LESS CENTRALIZED AND MORE FORMAL.
- POSIT #3: AS DEGREES OF UNCERTAINTY INCREASES, THE PLANNING PROCESS WILL BECOME MORE CENTRALIZED AND LESS FORMAL.

FIGURE 3.1

NOTES

1C. A. Moser and G. Kalton, Survey Methods in Social Investigation 2nd Ed. (New York: Basic Books, Inc., Publishers, 1972), pp. 257-260.

2Toyohiro Kono, "Long Range Planning--Japan--USA--A Comparative Study," Long Range Planning 9 (October, 1976), pp. 61-71.

3L. Kolakowski, Positivist Philosophy (Harmondsworth, England: Penguin, 1972), as cited in Catherine Marsh, The Survey Method (London: George Allen & Unwin, 1982), p. 49.

4Catherine Marsh, Ibid., p. 72.

5Barney G. Glaser and Anselm L. Strauss, The Discovery of Grounded Theory: Strategies for Qualitative Research (New York: Aldine Publishing Company, 1967).

6Catherine Marsh, Ibid.

7Ronald J. Kudla, "Elements of Effective Corporate Planning," Long Range Planning (August, 1976), pp. 82-93.

8Lahr, A Comparative Study of Long Range Planning, p. 106.

CHAPTER IV

FINDINGS

The researcher's purpose in this chapter is to report the results of a survey to inventory the planning attributes of postsecondary educational institutions in the State of Michigan. The data are organized according to the postsecondary education institutional types described by the Michigan State Board of Education in their publication, 1982-83 Michigan Postsecondary Admissions & Financial Assistance Handbook: Michigan Public Junior & Community colleges; Michigan Public Four-Year Colleges & Universities; Michigan Nonpublic Two-Year Colleges & Universities; Vocational School Programs Licensed by Michigan Department of Education, and Occupational Programs Licensed by Other State Agencies.

The first type, Michigan Public Junior & Community Colleges will be referred to in this chapter as "Community Colleges." The second type, Michigan Public Four-Year Colleges & Universities will be referred to as "Public Colleges." The third type, Michigan Nonpublic Two-Year & Four-Year Colleges & Universities will be referred to as "Nonpublic Colleges." The fourth type, Vocational School Programs Licensed by Michigan Department of Education and

the fifth type, Occupational Programs Licensed by Other State Agencies are combined and referred to as "Proprietary Schools."

The planning attributes inventories for each of these four postsecondary education groups will be compared using eight planning variables described in Chapter III: organization; planning style; type of plan; functional focus; time; planning focus; environmental scanning perspective; and strategic orientation.

Organization

A major assumption made by the researcher in this study was that the planning process is dependent on organization design and management style. Homogeneous organizations, using Ackoff's¹ typology, are more likely to limit participation of both internal and external resources in the planning process. One organizational manifestation of this constraining influence is the availability and use of communication channels for planning input: assumptions; policies; resource allocation, especially in budget preparation; planning organization, even if limited to a single individual performing a coordinating role; the reporting level of the planning function and the level of planning detail. Heterogeneous organizations, using these criteria would reflect a more open system of communication and broader dissemination of the institution's goals, objectives and strategies.

Nodality, again using Ackoff's typology, reflects management style. Scalar chains represent a hierarchical structure with decision-making authority always on the next highest level, uninodal. Contrast this type of organization with one where relatively autonomous decision-makers agree on strategies affecting their respective units or sub-units without mandatory next level involvement, multinodal.

Questions contained in both the preliminary and primary research instruments were aimed at organization. First, to gain some insight into contextural differences; and second, differences in organization of the planning function. The preliminary instrument, in addition to soliciting participation also asked for the name and title of the person who would act as survey coordinator. It was anticipated that in those institutions with a planning function the responsible administrator would be named; and in those institutions supporting the planning process without a formal planning function the administrator responsible for coordination of the planning process would be named (see Table A.P.3. for a complete listing of coordinator titles). In all cases, except public colleges the president was the most frequently named survey coordinator. Of the eight public colleges responding, diverse positions were named; the president was named twice, as was the director of planning; provost, dean of instruction, vice president for state relations, and budget officer were each named once. The absence of an

organization function or role designated as having planning responsibility and the position of the selected surrogate reflect both properties identified in Ackoff's typologies: geniety and nodality.

Budget methodology is also an indicant of organization and management style. Incremental budgeting assumes the current allocation or distribution of resources between activities and/or functions to be both equitable and optimum on a period-to-period basis. The variable is the size of the resource pool. As it increases all activities and functions participate; as it declines, all suffer. The dynamics of institutional strengths and weaknesses, as they interact with an evolving mission or changing goal-set may go unnoticed. On the other end of the resource allocation continuum is zero-base budgeting; this method requires at least an annual assessment of organizational strengths and weaknesses compared to the institution's mission, goal(s) and role(s) relations. Existing programs must present a case for funding as persuasive as that demanded of new programs competing for a share of available resources (see Table A.1-.1. for detailed listing of budget methodology reported by participating institutions).²

Public colleges (N=8) reported incremental budgeting as the method most often used, 62.5 percent; formula budgeting was used by 12.5 percent of the institutions--none reported zero-base budgeting. Proprietary schools (N=8)

reported 66.6 percent used zero-base budgeting; the balance of the institutions were evenly divided with 16.7 percent using incremental budgeting and the same percentage using formula budgeting. More than half of the community colleges (N=11) and nonpublic colleges (N=20) reported using incremental budgeting; 36.4 percent of the community colleges reported using planning, programming and budgeting systems and 21.1 percent of the nonpublic colleges preferred formula budgeting. For all four groups, fifty percent of the institutions indicated they used incremental budgeting as a resource allocation method. Table 4.3 compares all types of plans, including budget methodology.

Another dimension of the planning organization was explored with questions concerning the integration of planning methods; the presence of a central planning function, its size, hierarchical location and reporting level; planning detail and frequency of plan revision (see Tables A.1-1. to A.2C.1.6.).

None of the public colleges (N=8) reported integrated planning processes and only 20 percent of all reporting institutions (N=45) indicated this capability. Of those reporting a separate central planning function (N=22), 59.1 percent indicated it employed more than three employees. However, only 48.8 percent of all institutions (N=38) reported the existence of a separate central planning function. The most frequently mentioned level for the location of the function, when it existed, was "2" (senior

staff); reporting to level "1" (president). Decentralized planning, on a formal basis (part of the employee's position description), was generally confined to administrative staff and unit administrators. Faculty as a planning resource, for instance, ranked sixth overall among sixteen internal resource types listed for question 5B; however, when influence was considered in question 6, faculty importance ranked tenth on a list of twelve resources. Faculty was most valued at nonpublic institutions where they ranked fifth on a list of twelve resource types.³

Twenty-nine, or 63 percent, of the 46 institutions completing the primary (comprehensive) questionnaire indicated they were using strategic plans; 69 percent of those with strategic plans revised them annually or more frequently. Fifty-eight percent indicated a planning horizon of between four and nine years; no institution indicated use of a planning horizon greater than nine years for strategic plans.

The final aspect of organization dealt with functional imperatives (Parsons); assumptions (Scott); planning horizon (Steiner); and environmental scanning focus (Aguilar).⁴

Parson's Theory of Action model⁵ provides two concepts for considering the organization-environment interface. First, his functional imperatives provide an organizational typology for comparing value systems. The term imperative is indicative of its fulfillment as a

condition of stability and/or orderly change. The integration imperative found in Parson's model reflects a value system where solidarity is the unit of utility and parallels the assumption type, societal. Societal assumptions describe a measurable aspect of a social condition affected to some degree by postsecondary education.

Normative assumptions are equivalent to Parson's pattern-maintenance imperative, reflecting integrity as the unit of value. This assumption type describes a condition or variable over which the institution has some control and which affects the institution's ability to achieve one or more of its goals.

Context assumptions describe a condition or variable over which the institution has little or no control; yet, affects the institution's ability to achieve one or more of its goals. This assumption type is similar to Parson's adaptive imperative and utility is central to its value system.

Performance assumptions describe a measurable or observable behavior or variable used to determine program effectiveness or efficiency. This assumption type reflects effectiveness as central to its value system and parallels Parson's goal-attainment imperative.

Parsons also provided an insight into organization-environment relations by describing the functions of four levels of organization in societal systems: the technical, the managerial, the institutional and the societal.

In a postsecondary educational setting the technical levels parallel instructional and administrative staff; unit administrators such as deans, functional directors and senior administrators such as vice-presidents, including the provost, and the president would satisfy the managerial levels; a variety of roles ranging from the board of trustees for the focal institution, to state and federal agencies would satisfy the institutional role.

The source of planning assumptions, the type of planning assumption proposed, the futurity of those assumptions and the context within which the planning process operates will both coalesce and direct the thrust of the institution. Further, this climate for planning will significantly affect the institution's willingness and ability to cooperate, coordinate and even articulate its planning activities with those of the organization set.

Results of the survey indicated public colleges (N=5) tended to select pattern-maintenance assumption types for administrative and research planning areas; integrative assumptions were preferred for academic and community service planning areas; adaptive assumptions were most frequently selected for finance. The 1-3 year segment of the planning horizon was considered most important for all planning areas. No outside sources for assumptions were mentioned by public colleges and the most important internal sources, by a wide margin, were the president and the provost.

Community colleges (N=9) also preferred pattern-maintenance and integrative assumption types but they showed a much stronger interest in goal-attainment assumptions, especially for administrative and academic planning areas. Community colleges, like public colleges were preoccupied with the 1-3 year segment of the planning horizon. Outside resources for planning assumptions were mentioned, but the frequency and importance associated with these choices did not indicate even moderate interest. The president and academic vice president were the most frequently mentioned sources for planning assumptions.

Nonpublic colleges (N=13) were the most pragmatic in selecting assumption types: for finance they favored adaptive assumptions; for administration their choice tended toward goal-attainment; the academic planning area was split between goal-attainment and integrative; facilities, reflected pattern-maintenance; and community service favored integrative values. Nonpublic institutions reflected much more concern for the out-years of the planning horizon than any of the other groups. They also utilized a greater variety of assumption sources: president was the most favored, followed closely by; financial vice president; provost; faculty; board of directors; and department heads.

For all postsecondary educational organizations (N=32) the functional imperative most favored was adaptive when aligned with the financial planning function. The 1-3 year segment of the planning horizon was considered most

crucial, and the president was most often mentioned as the source for planning assumptions.

Both Ackoff's⁶ and Parson's⁷ typologies emphasize the importance of hierarchical relationships in professional organizations. The means selected for accomplishing the planning process in terms of organizational climate may be more important than the ends achieved or the plans produced. A balance must be maintained which recognizes the need to preserve value systems even when expediency is mandated. Turbulent environments are not sufficient cause for the abridgement of institutional values. Influence, futurity and values were the planning process variables investigated with question six, assumptions; part "A" dealt specifically with organization--who plans? Table 4.1 shows comparative relations for the four groups for each of these variables.

Planning Style

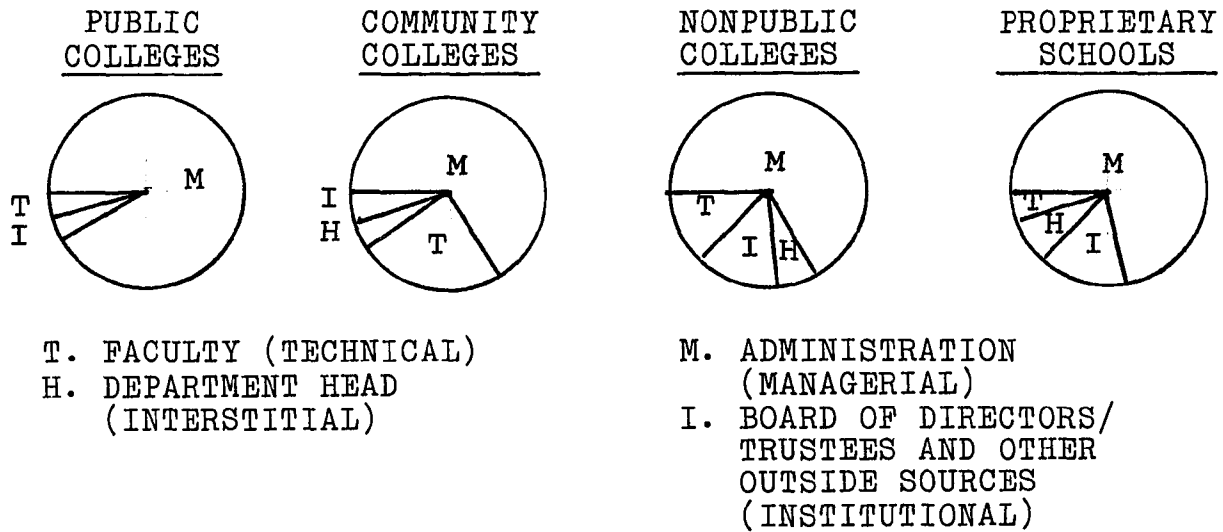
Budgeting generally represents the most detailed and comprehensive of the types of plans covered in the review of literature, it also covers a relatively close-in segment of the planning horizon, generally one year. Every institution responding to the survey indicated a budget was prepared and, as noted above, 50 percent used incremental methodology to prepare it. 37.8 percent of the institutions indicated that no long-range plan was prepared.

In fact, of the 77 institutions responding to the preliminary survey only 27 (35.1 percent) indicated that a strategic plan was in use (see Table A.P.1 for detailed

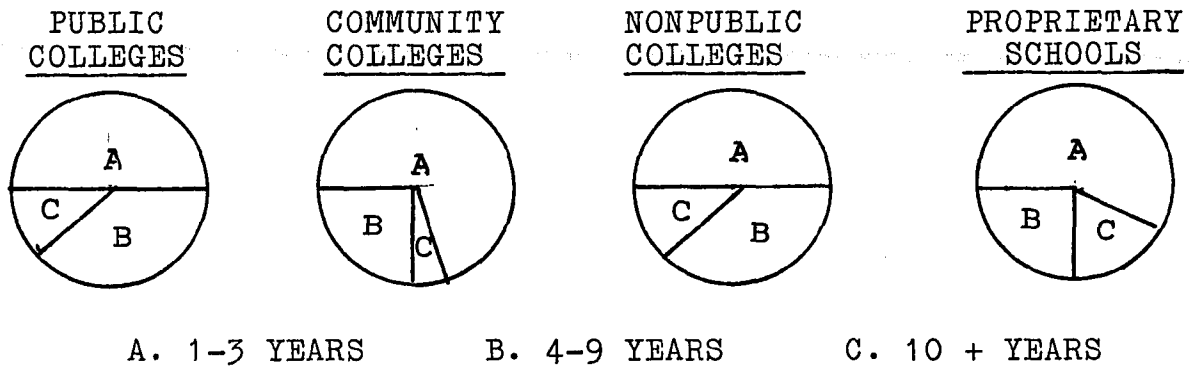
analysis of the responses to the primary (comprehensive) survey instrument; and Table A.P.2. for the response analysis of the preliminary survey instrument). Community colleges reported the greatest number of institutions with strategic plans, 10, or 52.6 percent; public colleges reported a ratio of 37.5 percent having strategic plans; proprietary schools indicated 31.2 percent; and nonpublic colleges 27.3 percent with strategic plans in use. All groups demonstrated planning styles which concentrated on a very short planning horizon, reflected limited participation, and fragmented planning processes.

Planning style, then, reflects both the institution's interest in planning and its approach to planning. Palola and Padgett⁸ described planning style in terms of a dichotomy: proactive, continuously anticipating and adapting to new conditions and commitments, or, reactive to situations and demands. Question 6D explored this dichotomy by asking the institutions to match two types of assumptions, trend and paradigm, with the six functional planning areas; they were then ask to select the one most often used, and the source suggesting the assumption type. Trend assumptions were defined as describing anticipated societal behavior in ways the institution believes will significantly influence its ability to achieve goals or determine goal selection. Paradigm assumptions were defined as describing anticipated effects stemming from value shifts. These forecasted "shifts" may be based on new

INFLUENCE



FUTURITY



VALUE STYSTEM

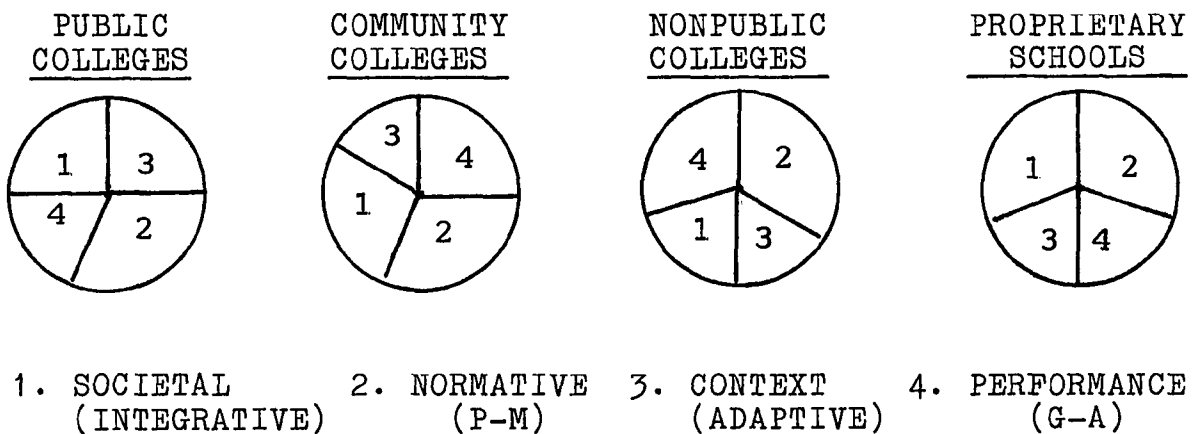


TABLE 4.1

perspectives gleaned from existing theories or new theories. Value shifts may impact the institution in a direct way, the public's perception of the worth of education; or indirectly through public policies such as those formulated immediately after the first Russian satellite was launched into earth's orbit. Leisure, knowledge, quality, equity, and freedom are examples of concepts institution's may monitor closely as they manage change. See Table A.6D.1 for a complete presentation of responses. Table 4.2 shows the planning areas and the assumption type most frequently selected by the four groups.

Type of Plan

The institutions (N=45) were asked how their budgeting process was related to the longer term plan and what form that plan took. Fifty percent of the public colleges (N=8) indicated that while they prepared budgets they did not prepare a long-range plan; 36.4 percent of the community colleges (N=11); 30 percent of the nonpublic colleges (N=20); and 50 percent of the proprietary schools (N=6) made the same response. Still, 50 percent of those responding indicated that periodically a comprehensive document referred to as the plan was prepared. This seemed to indicate that such plans had not recently been prepared; those plans returned with the questionnaire by several of the institutions were two or more years old.

In addition to a budget, almost half (21) of the institutions (N=46) responding indicated the presence of a

financial plan (45.7 percent). However, less than half, indicated the planning horizon covered a period greater than four years; and 52.4 percent indicated the plan, when it existed, was continuously revised. The same number of institutions, 21, indicated the presence of an academic plan, and 14, or two-thirds, reported the plan to be less than one year old. Eight institutions reported research plans; eighteen reported facilities plans, with one covering a period greater than ten years. Fourteen institutions, 31 percent, indicated the presence of a community service plan, while community colleges, with 6 institutions indicating the existence of such plans, accounted for more than forty percent.

Strategic plans were prepared by 29 institutions and 17 indicated planning horizons exceeding four years. This seemed to suggest a preference for plans which dealt with a limited number of issues rather than the comprehensive plans recommended in the literature several years earlier or mathematical models. While a few respondents objected to the use of the term "strategic" planning, criticizing it on the grounds that it was a buzz-word, conjured up by consultants, the term seemed to be understood, based on the replies, by an overwhelming majority. The data suggest wide use of incremental budgeting, followed by some type of strategic plan covering a relatively near-term period as the type of planning most often done by those responding to the survey. Table 4.3 shows the type of plans currently in use by each group.

PLANNING STYLE

PLANNING AREA	PUBLIC COLLEGES		COMMUNITY COLLEGES		NONPUBLIC COLLEGES		PROPRIETARY SCHOOLS		TOTAL	
	<u>T</u>	<u>P</u>	<u>T</u>	<u>P</u>	<u>T</u>	<u>P</u>	<u>T</u>	<u>P</u>	<u>T</u>	<u>P</u>
FINANCE	1	2	5	3	9	3	3	2	18	10
ADMIN.	2	1	5	3	4	8	3	2	14	14
ACADEMIC	3	1	4	4	6	6	1	4	14	15
RESEARCH	-	2	2	1	2	6	1	1	5	10
FAC.	2	1	7	1	10	2	2	3	21	7
COM.SER.	<u>1</u>	<u>1</u>	<u>2</u>	<u>6</u>	<u>7</u>	<u>4</u>	<u>1</u>	<u>2</u>	<u>11</u>	<u>12</u>
TOTAL	9	8	25	18	38	29	11	14	83	68
N =	4		8		12		5		29	
NOT APPLICABLE	4		3		8		1		16	
T = TREND ASSUMPTIONS					P = PARADIGM ASSUMPTIONS					

TABLE 4.2

THE DATA SHOWN ON THIS TABLE SUGGEST THREE POINTS:

1. THE FUTURE IS NOT VERY CLEAR. THERE WAS SIGNIFICANT VARIABILITY BOTH WITHIN AND BETWEEN GROUPS.
2. OF THE FORTY-SIX INSTITUTIONS PARTICIPATING IN THE SURVEY MORE THAN 1/3 INDICATED THE QUESTION WAS NOT APPLICABLE TO THEIR PLANNING PROCESS.
3. NO GROUP IS MORE PROACTIVE THAN ANY OTHER, WITH THE POSSIBLE EXCEPTION OF PROPRIETARY SCHOOLS IN THE AREA OF ACADEMIC PLANNING AND NONPUBLIC COLLEGES IN THE AREA OF ADMINISTRATION.

TYPE OF PLAN

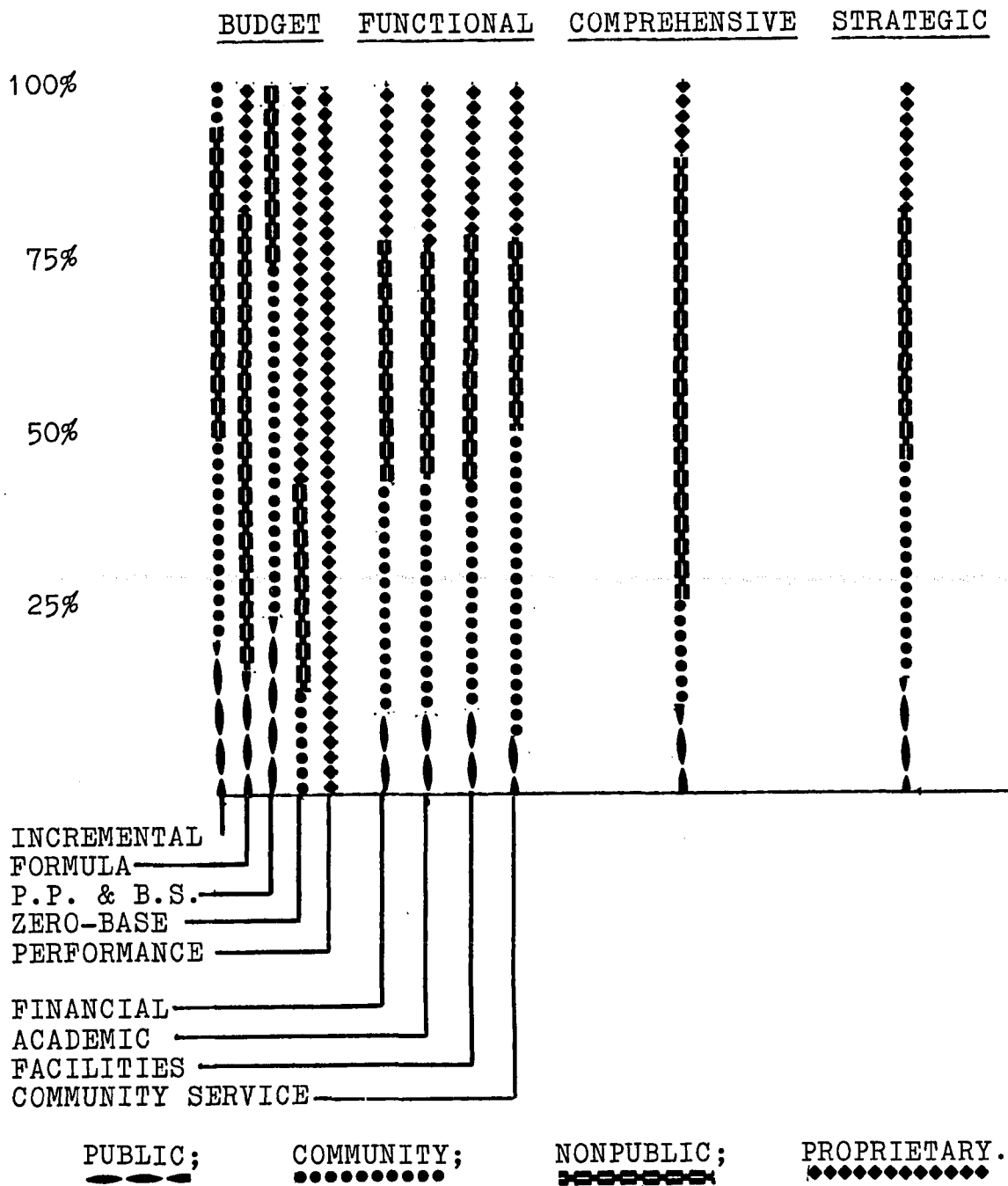


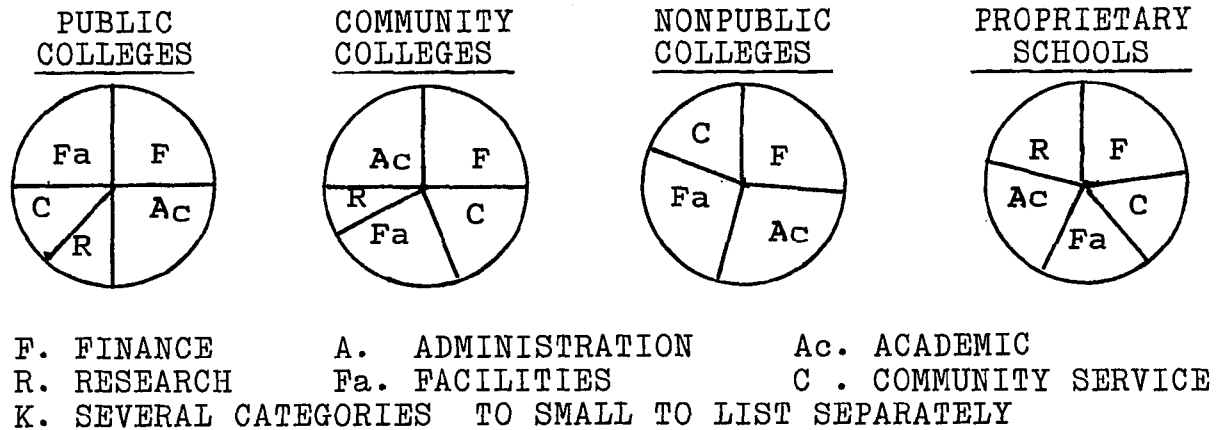
TABLE 4.3.

Functional Focus

Functional focus refers to those planning areas receiving the greatest attention and the source(s) of planning input; in both instances academic was clearly the dominant function. Academic plans, other than budgets, were mentioned more frequently than any other type of plan. The president was mentioned more frequently than any other administrator as the source of planning input. (See Tables A.2C.1., A.5B.1., and A.6A.1.-A.6D.1.)

The planning variable, functional focus, takes Ackoff's⁹ course grained concept of geniety, described under the planning variable, organization, and combines it with Ewing's¹⁰ dichotomy for evaluating policy based on the decision-makers perspective: outside-in; inside-out. The homogeneous organization is most likely to take the inside-out approach rationale. This management perspective leads to decisions which place more priority on organization continuity than on mission, goal or role. The outside-in perspective, on the other hand, is more "market" oriented. This type of organization seeks out needs and adapts the organization to meet those needs. The heterogeneous organization, following this outside-in approach will draw on a wide-range of planning resources. Functional focus provides an interface between the planning variables organization and strategic orientation. Table 4.4 compares the four groups of postsecondary educational institutions on the type of function for which a plan or plans have been developed and the source for the planning assumptions.

FUNCTIONS WITH PLANS



SOURCE OF INPUT

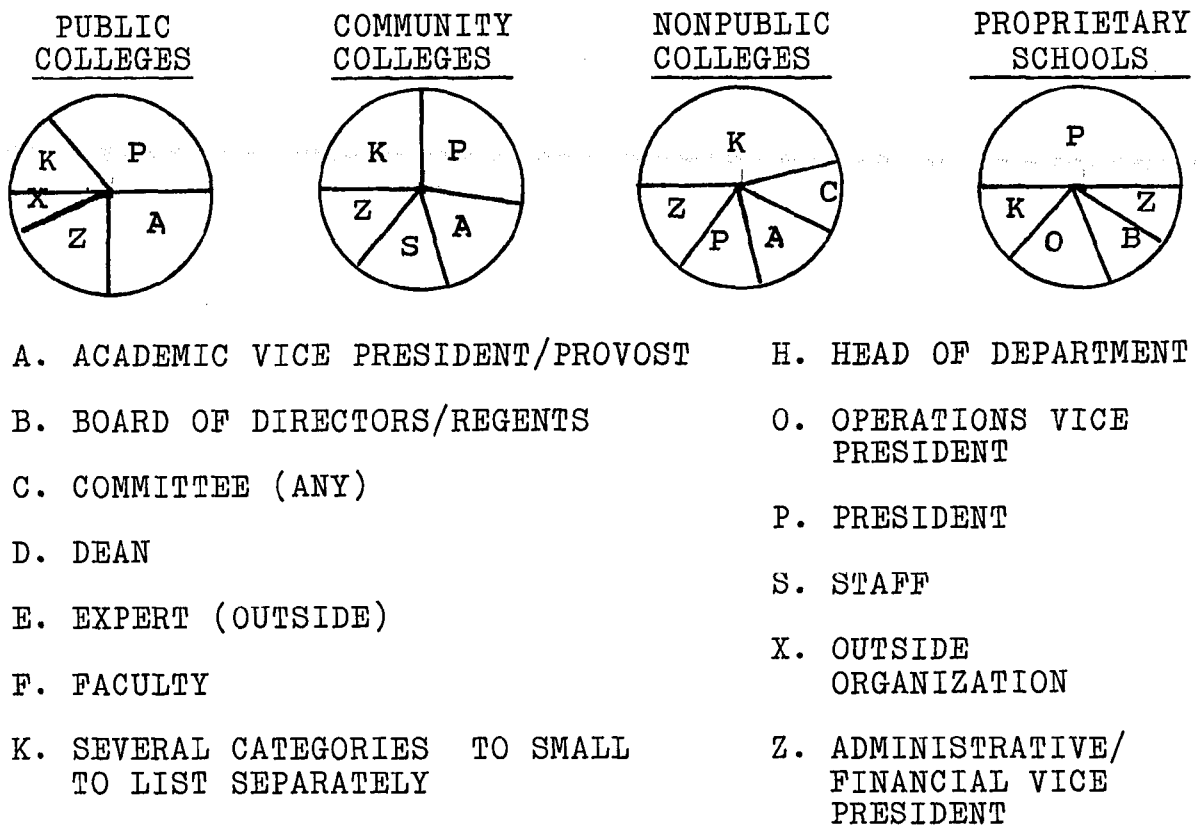


TABLE 4.4.

Nonpublic colleges displayed the greatest propensity toward heterogeneity and an outward-inward perspective. Proprietary schools appear to represent the other, inward-outward perspective; however, even the nonpublic group

showed little interest in outside planning resources, a point which was strengthened by their responses to question 5A. (see Table A.5A.1)

Time

The study included time as a planning variable in two ways: the futurity of current decisions, and the anticipation of trends or value shifts. The first issue was covered with the question of commitments extending beyond the budget period. Eighty percent of the forty institutions responding to this question indicated they did not make commitments of funds beyond the budget period of one-year. The 20 percent responding in a positive manner cited a variety of contracts with maturities extending beyond the budget period (labor contracts).

This perspective of time sought to address the issue of "will the future be like the present" and how far into that future is the trend expected to last? Seven of the eight general survey questions explored this concept. All of the institutions focused their planning energies on the next 1-3 years and indicated that the near-term future would be most like the current period, the balance of the planning horizon was either ignored or addressed in a very minimal way.

The second perspective of time was approached with question 6D. It considered the future, not in terms of the futurity of present decisions, but, rather, on the basis of how one's perspective of the future is likely to influence

present decisions. This logic follows Alm's¹¹ concept of "planning from the future for the future."

Public colleges (N=4) favored the notion that value shifts should be considered in planning for finance and research; current trends should be expected to continue, however, for administrative, academic, facilities and community service planning areas. The president was the primary source for assumptions, except in the academic and facilities planning areas; however, one assumption source was as likely as any other to name either assumption type, trend or paradigm.

Community colleges (N=8) indicated a preference for trends in all planning areas, except community service where a strong expectation of value shifts was indicated. The president was considered an important source for planning assumptions; however, in the area of finance the vice president for finance was the most important contributor as was the dean of instruction or academic vice president for the academic area.

Nonpublic colleges (N=12) expected value shifts in the areas of administration and research. Half of those responding expected value shifts in academic areas. Trends were expected to continue in finance, facilities and community service. In contrast to the other groups of institutions the nonpublic colleges indicated far greater variety in sources for planning assumptions. Every source listed was selected at least once with the board of

directors/trustees reflecting significant strength, even faculty was mentioned in connection with academic, research and community service planning areas (see Table A.6D.1.)

Proprietary schools (N=5) expected value shifts in academic, facilities and community service planning areas. Forty percent of those responding also expected value shifts in finance and administration. The president and vice president of operations were most often named as sources for assumptions, with the president being named almost three times more often. Homogeneous tendencies were evident in all groups, however, proprietary schools showed the greatest tendency toward that organizational structure, especially when strategic planning variables such as forecasting were concerned.

Planning Focus

Planning focus reflects how the institution interacts with both the internal and external environment. Choice of assumption sources, planning resources and type of planning assumptions used were considered indicants of planning focus.

The first aspect of this planning attribute to be considered is the use of planning resources. Table 4.5 lists both the internal and external resources used by each group. A composite ranking¹² based on the weighted average of the responses for all groups is shown next to the description of the resource. The data analyzed were responses to question 5 which requested respondents to rate

each resource type in terms of emphasis for each of three segments of the planning horizon; the scale ranged from "1," reflecting the greatest emphasis, to "4" reflecting only minor interest, "0" was used to indicate resource categories which were not applicable to that institution. Part "A" listed eight outside resources with space for additions; part "B" listed seventeen internal resources with space for additions. Two observations are worth mentioning:

1. The highest rating assigned to an outside resource, 3.45, was surpassed by six internal resources
2. The ranking of faculty as the sixth most important resource for planning was somewhat inconsistent with its lower level of importance as a source for planning assumptions described in question 6. This discrepancy is explained, in part, however, by the degree of homogeneity exhibited and the fact that parameters for strategic planning, typically, have been established by a few high level administrators. Development of the strategic plan usually includes a more diverse mixture of functions and levels. This relationship is changing, however, as environmental scanning systems are being developed which include a wide-range of resources, both internal and external to the organization. It would appear this planning

PLANNING RESOURCE DISTRIBUTION

<u>P.C.</u>	<u>C.C.</u>	<u>N.C.</u>	<u>P.S.</u>	<u>RANK</u>	<u>C.W.R.</u>
7	2	4	1	STATE/LOCAL ASSOC.	3.36
4	5	1	4	REGIONAL/NATIONAL ASSOC.	3.06
3	4	5	7	OTHER POSTSECONDARY	2.94
1	1	8	3	LEGISLATIVE FISCAL AGENCIES	2.85
2	6	3	6	PAID CONSULTANTS	2.82
8	3	6	2	STATE DEPARTMENT OF EDUCATION	2.73
5	8	2	5	PROFESSIONAL ASSOC.	2.60
6	7	-	-	DEPARTMENT OF MGT. BUDGET	.79
-	-	7	-	RELIGIOUS	.58
-	9	-	-	LOCAL/REGIONAL PLANNING AGENCIES	.30
-	10	-	-	CENSUS DATA	.30
-	11	-	-	M.E.S.C.	.18
9	-	-	-	FEDERAL GOVERNMENT	.09

INTERNAL PLANNING RESOURCES

1	1	1	1	PRESIDENT	7.09
2	2	2	8	ACADEMIC VICE PRESIDENT	5.52
4	5	3	2	FINANCIAL VICE PRESIDENT	5.06
3	3	4	3	GOVERNING BOARD	4.76
5	4	5	6	DEPARTMENT HEAD	4.24
6	6	6	7	FACULTY	3.67
7	7	8	5	PLANNING OFFICER	3.53
14	8	7	9	REGISTRAR	3.27
9	9	11	11	STUDENT, FACULTY ADM. COMM.	2.79
11	11	9	14	ACADEMIC COUNCIL	2.73
10	12	10	10	INSTITUTIONAL RESEARCH	2.73
8	10	16	4	OPERATIONS VICE PRESIDENT	2.58
13	13	13	15	STUDENT GROUPS	2.09
16	15	12	12	ALUMNI INDIVIDUAL	1.85
12	16	14	13	ALUMNI GROUPS	1.82
15	14	15	16	STUDENTS INDIVIDUAL	1.73

P.C. PUBLIC COLLEGES
 C.C. COMMUNITY COLLEGES
 N.C. NONPUBLIC COLLEGES
 P.S. PROPRIETARY SCHOOLS
 C.W.R. COMBINED WEIGHTED RESPONSE

TABLE 4.5

concept has not yet gained wide-spread acceptance in postsecondary education.

Each of the fifteen assumption types appearing in this study permits a slightly different glimpses at the planning process from five perspectives: type of assumption, which includes organization, environment-general, environment-specific, and forecasting; futurity; management style, who plans; lead education indicators; and domain mapping. Planning focus utilized the concept of domain mapping to compare the environmental relations of the four postsecondary educational groups.

Each group's domain includes a general environment consisting of societal, and context assumption types; and a specific environment consisting of normative, performance, structured, cultural, input, throughput and output assumptions. The boundaries of the domain are selected from the environmental segment assumptions: science and technology, economic; demographic; and political. The maps projection may be trend, paradigm or a combination. The domains of the four groups should touch, even overlap, but they should not be identical. Table 4.6 compares the groups' domains.

Public colleges (N=4) selected assumptions which indicated tendencies toward traditional education values and a relatively broad scoped perspective which suggested a confidence in its capacity to influence some aspects of the environment.

Community colleges (N=8) were less traditional tending toward integrative values along with the more traditional pattern-maintenance value system generally associated with higher education. This group was confident in its ability to deal with and influence its environment. The group was more interested in its specific environment and presented a perspective which was both short-term and trend oriented.

Nonpublic colleges (N=12) projected a more proactive value system, combining pattern-maintenance values with an orientation toward performance. Both nonpublic and community colleges indicated concern for trends affecting their primary service areas. All groups, except proprietary schools indicated an inward-outward perspective reflecting greater concern for the internal environment and organizational maintenance, than an outward-inward approach.

The proprietary school (N=5) group showed some of the same organizational characteristics as those displayed by the community college group, except the tendency toward integrative was stronger. This group was proactive and oriented toward the external environment; it expected value shifts to occur in the short-term.

Although there were subtle differences between the traditional higher education groups, similarities were far more obvious. The two which could be of greatest importance are: 1) the extremely near-term planning horizon all groups relate to, and 2) the tendency of the higher education

DOMAIN MAP				
	<u>PUBLIC COLLEGES</u>	<u>COMMUNITY COLLEGES</u>	<u>NONPUBLIC COLLEGES</u>	<u>PROPRIETARY SCHOOLS</u>
ORGANIZATION:	PATTERN-MAINTENANCE	PATTERN-MAINTENANCE/	PATTERN-MAINTENANCE/ GOAL-ATTAINMENT	INTEGRATION/
ENVIRONMENT,				
GENERAL :	COMBINATION	SOCIETAL	COMBINATION	SOCIETAL
SPECIFIC:	NORMATIVE	STRUCTURAL	NORMATIVE/CULTURAL	INPUT
BOUNDARY :	ECONOMIC	DEMOGRAPHIC	DEMOGRAPHIC	ECONOMIC
PROJECTION :	COMBINATION	TREND	TREND	PARADIGM
LEAD				
EDUCATION	INFORMATION/	PREDICTIVE	INFORMATION/	PREDICTIVE
INDICATOR:	PROBLEM-ORIENTED		PREDICTIVE	

TABLE 4.6

groups to believe the future will be a reflection of the past educational environment. All groups tended to limit the planning resources utilized to senior administrators, as noted earlier this characteristic of strategic planning is changing. Nevertheless, the futurity and perspective of the planning process seemed to contradict the assertion by the institutions that strategic planning, or any type of planning, other than incremental budgeting, is occurring on a regular or systemic basis (see Table A.P.2. for preliminary survey data).

Environmental Scanning Perspective

This planning variable was concerned with identifying which of the environmental segments the institution was most concerned with and the range of interest between the specific environment and the general environment. Aguilar¹³ found several problems which organizations must be willing to deal with in order to enjoy the benefits of environmental scanning: 1) process large quantities of data, and 2) develop methods for distinguishing between relevant and non relevant information. The second problem leads to the recognition of two quasi-organizational issues: 1) informing the scanners of the organization's strategies, and 2) helping the scanner learn his/her competence level relative to the data scanned and their source. Homogeneous, uninodal organizations will have fewer scanners, and those scanners will have higher level positions. Heterogeneous organizations will tend to be

more open and therefore will use a greater number and variety of scanners.

The assumption sources listed for question 6 reflect possible scanning roles and the assumption types represent areas or segments of the environment available for scanning. Question 6E listed four types of filters which scanners might use to interpret information. Question 6D explored the forecasting perspective of the scanner. Question 3 listed the equipment and software available to the institutions for information processing (See Tables A3 and A6 for detailed responses).

The general environment in this study was represented by planning assumption types: science and technology; economic; demographic; and political. The specific environment was represented by the planning assumption types: structural (internal); cultural (internal); input (external); throughput (internal); and output (external). Table 4.7 indicates the environment most likely to be scanned if scanning is included in the institution's planning process.

Question 6E presented respondents with the problem of matching assumption categories with education indicators. Scanners searching for lead education indicators have four types of filtering models available for identifying environmental signals which may, or should, impact postsecondary education plans: informative, predictive, problem-oriented, and program-evaluation.

SCANNING PERSPECTIVE

	<u>PUBLIC COLLEGES</u>	<u>COMMUNITY COLLEGES</u>	<u>NONPUBLIC COLLEGES</u>	<u>PROPRIETARY SCHOOLS</u>
GENERAL ENVIRONMENT:	ECONOMIC	DEMOGRAPHIC	DEMOGRAPHIC	ECONOMIC
SPECIFIC ENVIRONMENT:	COMBINED	INTERNAL	INTERNAL	EXTERNAL
FORECASTING FOCUS :	TREND	TREND	TREND	PARADIGM
INTERPRETING MODE :	PROBLEM- ORIENTED	PREDICTIVE	PREDICTIVE	PREDICTIVE

TABLE 4.7

Informative indicators describe the state of society and changes taking place within it. To qualify for this model, social statistics must be subject to regular production as time series with the possibility of disaggregation by what are considered through research to be the most relevant variables.

Public colleges (N=3) apparently use this model most often for monitoring organization climate; the demographic segment of the general environment; the external specific environment; and value shifts, all of these variables take an outward-inward approach and their selection is consistent with the data criteria indicated for use with the model. Two problems, however, are associated with this group's response: 1) "N" is extremely small; 2) it is generally inconsistent with the group's response to question 8A; where only one respondent indicated availability of forecast data of the type noted above.

Community colleges (N=8) selected this model for monitoring organization climate; science and technology, and political segments of the general environment; and input, a specific environment variable. As in the case of public colleges these selections were compatible with the model's criteria for data; in this case, however, "N" was a bit larger and represented 73 percent of all institutions in the group. Six of the institutions actually presented forecast data for question 8A, indicating some response consistency; still, much of the data requested was supplied by only four institutions.

Nonpublic colleges (N=13) preferred this model for areas dealing with organization climate and the specific environment. These choices also match the model's data requirements; "N" is reasonably large compared to the total for the group (N=20) and, more important, eight institutions were able to provide forecasts for all the variables in question 8A. This represented reasonable evidence that some planning was being accomplished by the group. While only 13 responded to this question, 6E, eighteen responded to question 8 and 44 percent had developed forecasts for the full range of data requested.

Four proprietary schools responded to this question (6E) and preferred the informative model for organization climate and the demographic segment of the general environment. Each choice was a good fit for the model and three of the four respondents were able to provide forecasts

for some of the areas covered by question 8. Some of the areas, such as tenured faculty did not apply; other areas were of little interest, such as student credit hours. Still, where there was planning interest, forecast data was available.

Predictive indicators are those operationalized system components and goals that fit into explicit models of the social system; they are similar to informative indicators with the additional criterion of belonging to a formal model.

Public colleges selected this model for monitoring the economy. Community colleges selected it for monitoring the adaptive aspect of organization climate, the economic, and demographic sectors of the general environment and as a forecasting vehicle for both value shifts and trends.

Problem-oriented indicators are operationalized social problem areas. They are intended to be directly helpful in providing the basis for policy solutions and should ideally point toward required action or the need for further investigation; supporting statistics are likely to be "one-off," as opposed to regularly produced.

Public colleges (N=3) selected this model most frequently, and it was least popular with community colleges (N=8). It was only marginally useful to nonpublic colleges (N=13) and proprietary schools (N=4). These responses are reasonable because unique studies are required for each problem area, requiring staff or institutional research

personnel. Institutions using strategic planning concepts would be more likely to choose this indicator model.

Program-evaluation indicators provide base-line information concerning national or statewide programs. Once a program has been developed and implemented by an agency or bureau it is important to have some measure of how effectively it is meeting its aims (policies/ goals) and how efficiently it is using the aggregate resources committed to it. Program-evaluation indicators may be useful for comparing the institution's goals and mission with state and national policy.

Public colleges (N=3) found this indicator model useful for monitoring the internal environment as it applied to programs where standards or norms were well established. Community colleges (N=8) selected this model to monitor internal performance and client needs. Nonpublic colleges (N=13) found this to be the least attractive of the indicator models. This appears to be somewhat of an anomaly. The group preferred the goal-attainment assumption type, performance, and one would, therefore, expect the program-evaluation model to be valued more highly than one of the other models.

Based on the responses to question 6E it would appear that regular reporting and government incentives could make these indicator models, or more sophisticated versions, quite useful for effecting coordination in a relatively unobtrusive way, and at the same time provide the

means for implementing planning systems to those institutions on the planning fringe, a position which would appear to be heavily populated.

Strategic Orientation

The principal area of interest for this planning variable was forecasting. Did the institution expect change and, if so, how did it expect to prepare for change? The use of education indicators by postsecondary educational institutions was of interest, as well as their ability to discriminate between indicators in anticipating the direction and magnitude of change. Which type of institution tended to be more proactive in dealing with or preparing for change? Question eight asked for time series data covering a variety of personnel and funding trends to observe the interaction of the planning variables in specific forecasting areas.

Strategic orientation includes forecasts for retention of students; effectiveness; growth; efficiency and flexibility. It also considered the issue of autonomy by looking at forecasted funding sources and changes in mix and level of contribution from each type (see Tables A.8A-A.8B for detailed responses).

Six public colleges answered this question but only one supplied data beyond 1983 for new students, and no institution was able to supply graduating student forecasts beyond 1983; therefore, it is not known how this group expects to perform on this important criterion. The same

problem occurred for the other data categories. Of course, it is possible the institutions did not wish to share this information (only one was able or willing to supply forecast information beyond 1983, except for total students where two institutions supplied forecasts) or, a more provocative possibility is they have not established a plan beyond the 1983 budget.

Ten community colleges answered the question but only six were able to supply forecasts beyond 1983 and only three were able to furnish forecasts for all items.

Eighteen nonpublic colleges answered the question for the period through 1983; however, only six were able to supply forecasts for all items.

Five proprietary schools responded to the question but only one was able, or willing, to provide forecasts for all items.

The second part of question 8 dealt with funding patterns and trends. Only one public college supplied forecast data beyond 1983. The other groups were more responsive and the results are noted in Table 4.8.

The planning resources, scanners, used by each group are listed on Table 4.5, and indicates a preference for internal, senior administrators. This knowledge, combined with the data shown on Table 4.8 indicates a somewhat limited scanning ability/interest by all the groups. Proprietary schools, however, were consistently more responsive to questions dealing with the external

FUNDS FORECAST

FUNDING SOURCE	PUBLIC COLLEGES			COMMUNITY COLLEGES			NONPUBLIC COLLEGES			PROPRIETARY SCHOOLS		
	1982	1983	1987	1982	1983	1987	1982	1983	1987	1982	1983	1987
o TUITION												
N	5	4	1	9	9	7	16	15	11	5	5	4
X	23.7%	30.4%	40.0%	25.3%	26.9%	29.5%	61.3%	64.2%	66.6%	96.0%	95.0%	91.3%
SD	8.1	8.3	-	7.1	7.4	6.7	22.4	22.2	24.8	8.9	11.2	17.5
o LOCAL												
N	-	-	-	10	10	8	-	-	-	-	-	-
X	-	-	-	27.1%	29.2%	27.1%	-	-	-	-	-	-
SD	-	-	-	10.4	10.3	11.9	-	-	-	-	-	-
o STATE												
N	5	4	1	9	9	7	7	7	5	1	1	1
X	46.1%	52.9%	50.0%	37.3%	35.3%	33.9%	1.4%	1.3%	1.5%	10.0%	10.0%	15.0%
SD	17.7	13.6	-	7.9	6.9	6.2	-	-	-	-	-	-
o FEDERAL												
N	5	3	1	6	6	4	7	7	5	1	1	1
X	10.8%	5.4%	-	5.1%	2.7%	2.2%	8.7%	7.6%	5.4%	10.0%	15.0%	20.0%
SD	7.3	9.2	-	2.7	2.3	1.6	7.9	7.2	4.9	-	-	-
o OTHER	19.4%	11.3%	10.0%	5.2%	5.9%	7.3%	28.6%	26.9%	26.5%	(16.0%)	(20.0%)	(26.3%)
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE 4.8.

environment and tended to anticipate change more than the other groups.

The final aspect of strategic orientation was covered by question 7 which considered the evolution of goals. Twenty goal types ranging from research to faculty development were listed with provision for additions. Respondents were requested to rate each goal type over three time-frames: 1-3 years; 4-9 years; and 10+ years. The rating scale started with "1" for greatest emphasis; "2" significant; "3" moderate; "4" minor, and "0" for not applicable.

Public colleges (N=3) were most interested in research and professional level preparation over all three time frames. They also recognized a growing need for organization, faculty and program development, reaching the greatest level of emphasis in the 10+ segment of the planning horizon.

Community colleges (N=8) were most interested in vocational preparation, with growing interest in leisure skills, and organization, faculty and program development. Strong, continuing interest was indicated in associate degree programs; however, very little interest was shown for compensatory education.

Nonpublic colleges (N=13) indicated strong immediate interest in organization development and continuing into the 4-9 year time-frame. The general or liberal arts degree was the main focus of degree programs.

Proprietary schools (N=5) indicated strong, continuing interest in vocational education. Several indicated interest in associate and bachelor's degree programs in later years. This group was also concerned about organization development in the near-term.

The goals selected by all four groups, and the relative degrees of emphasis reflected traditional postsecondary educational values. Only a very few institutions indicated any interest in exploring uncharted areas.

The findings presented in this chapter were considered to be important and representative of the value of the study. As the data are subjected to further analysis, both by this researcher and others interested in planning for postsecondary education, and postsecondary educational planning, additional findings, perhaps of greater significance than those presented here, will be forth coming.

The most significant finding was made at the very start of the study. Only 27 of the 77 institutions (35.1 percent) responding to the preliminary survey indicated they had prepared and were currently using a strategic plan. Of course, many more indicated they were in the process of preparing a plan or evaluating the benefits of planning.

This study was not designed to predict the number of postsecondary educational institutions that would have a plan by some future date, nor was it designed to comment on

the quality of planning presently being accomplished. The study was intended to inventory certain planning attributes of as many postsecondary educational institutions as possible, the only constraint toward that end being the institution's willingness to participate. The findings presented in this chapter are the result of that effort. Hopefully, they will be useful to other researchers, so that cumulative results will be possible as future studies are conducted in this important area--postsecondary educational planning. In the following chapter, the researcher will summarize these findings and make recommendations, both for future research and ways to encourage more institutions to plan.

¹Ackoff, Ibid. chapter II, p. 72.

²Data for each survey question are presented in Appendix A. References to those data will take the form: Appendix "A"; followed by the question number, "6A", for example; followed by the chart number "1", for example; the last character will indicate multiple pages. References will read, for example, see Table A.6A.1.1.

³See chapter III p. 213 for detailed explanation regarding ranking methodology.

⁴Hills, Ibid. chapter II, p. 73 Scott, Ibid., chapter II, p. 65 Steiner, Ibid., chapter II, p. 66 Aguilar, Ibid., chapter II, p. 142.

⁵Ackoff, Ibid.

⁶Ackoff, Ibid.

⁷Hills, Ibid.

⁸Palola and Padgett, Ibid.

⁹Ackoff, Ibid.

¹⁰Ewing, Ibid.

¹¹Alm, Ibid.

¹²See Ranking Methodology discussion in chapter III.

¹³Aguilar, Ibid., pp. 58-59.

CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

In this chapter, the writer has presented a summary of the study and findings followed by his conclusions, which were based on the findings, theories and constructs of the study as well as research found in the literature. The implications are the product of that analysis.

Summary

Background

The issue of autonomy has influenced virtually every major state policy aimed at postsecondary education since 1850. In fact, Michigan has led the other states in measures to guarantee autonomy to its state higher education institutions. The latest effort toward that end was incorporated in the 1963 State Of Michigan Constitution (effective January 1, 1964). Unwittingly, or otherwise, the language contained in that document not only guaranteed autonomy for the institutions but also, by designating them as coequal entities with state agencies, eliminated the possibility of any regulatory coordination, and posed the threat that voluntary cooperation might, in some way, diminish the institution's legal status.

Michigan's educational community, after several decades of enjoying large scale growth and a supportive environment has been faced with the problem of adjusting to one which is both turbulent and more tightly coupled. The change has been linked to militant campus involvement covering a variety of social and political issues, with roots dating to the 1950's and 1960's. Coupled with higher education's more proactive role was a perceived devaluing of advanced degrees and loss of integrity (a pattern-maintenance object of value). Both of these charges, voiced by critics given a platform as "activists" and other special interest groups seeking ways to legitimate their roles, reflected substantive changes in what was once considered by some to be an impenetrable curtain, sheltering academe from a harsh political reality, and making autonomy a fiction.

As the criteria for allocating a shrinking resource base between competing social institutions increasingly focuses on performance, the status, if not the continuity, of some educational institutions will become problematic. The cry for statewide coordination, if not control, will be heard again and again with either retrenchment or a constitutional amendment finally legitimating what many administrators have already recognized, namely that autonomy is a relative and not an absolute status.

The turbulence is pervasive. Not only is the educational environment tenuous but so are the state's

economic, social and political environments. This wide spread trauma may, in some ways, however, be a friend to education; postsecondary education could, in fact, provide a near term solution for some of the problems faced by the other environmental sectors. Restructuring the state's economy, for instance, must begin with a coordinated postsecondary education effort. The issue of coordination, of course, is perhaps the most divisive of any facing postsecondary educators. At the heart of this issue and the focal point of this study is the question of planning. Advocates of autonomy argue that institutions are capable of planning and the outcome will benefit both the state and the institutions. Advocates of statewide coordination, on the other hand, argue that an institution can no doubt plan for itself but will the state benefit? Even if the state should benefit, they assert, the cost will be higher than would have been incurred under statewide coordination; both sides seem to agree that postsecondary educational institutions have the ability and the incentive to plan, the disagreement is centered on cost and benefits.

Purpose

The purpose of the study was focused on exploring a fundamental premise, accepted by both critics and friends of postsecondary education: institutions plan. The study was designed to examine the planning practices of postsecondary educational institutions in the State of Michigan for indicants of style and commitment in meeting their strategic

goals and the long-term educational needs of the state. To accomplish this objective the study was divided into three discrete activities:

1. Inventory the planning attributes of postsecondary institutions.
2. Explore the efficacy, based on the planning attributes inventory, of both (autonomy, statewide coordination) political models as implemented systems, using existing planning processes; or, if a new political model is required, to ensure an adequate postsecondary education delivery system.
3. Consider the possibility, if one exists, that the casual use of indicators by the institutions surveyed suggests a pattern which could lead to the institutionalization of educational indicators in the State of Michigan.

Procedure

The research utilized survey methodology. Two questionnaires were developed and pretested. The first instrument was designed to serve as a response vehicle. It was mailed, along with a cover letter explaining the study, to 162 presidents of postsecondary educational institutions in the State of Michigan. This questionnaire requested the following information: the current status of planning, involving five choices ; and the name and title of a person the president would designate as the institution's survey coordinator. Seventy-seven responses were eventually received.

The second questionnaire was mailed to the person named by the President as that institution's survey coordinator. The questionnaire consisted of eight questions, six with multiple parts. All of the questions were of the closed-end type, except two which could be answered with one or two words or numbers. Forty-six completed questionnaires were returned; this required numerous telephone calls and one reminder-card mailing.

Each response, on both instruments, was carefully tabulated; and statistical treatments to determine central tendency and variability were used where appropriate. The objective of these instruments was to record certain planning attributes of each participating institution.

The institution's responses were sorted into four groups: public colleges; community colleges; nonpublic colleges and proprietary schools. These designations generally followed a typology used by the State of Michigan Board of Education. The data were aggregated by group and the groups were compared using eight planning constructs: organization; planning style; type of plan; functional focus; time; planning focus; environmental scanning perspective; and strategic orientation.

Comparisons were limited to the planning attributes inventoried. The study did not attempt to develop planning attributes as correlates of quality for either the planning process or institutional management traits. The constructs, developed from a review of the literature, suggested the

presence of certain characteristics or the absence of certain attributes could indicate a variety of organizational pathologies. Some of these possibilities were explored in the process of analyzing the data.

Empirical Findings Summarized

This study inventoried certain salient planning attributes, suggested in the planning literature, to determine the status of planning, the potential for planning and planning style at forty-six postsecondary educational institutions in the state of Michigan. This detailed analysis followed a preliminary survey to determine the general status of planning and invite participation in the more detailed study. Seventy-seven institutions responded and sixty-four agreed to participate. The study did not evaluate the quality of the institution's plan; its focus was directed toward identifying the existence of, and in some cases the strength of, certain planning attributes.

Study Participation

	<u>Public Colleges</u>	<u>Community Colleges</u>	<u>Nonpublic Colleges</u>	<u>Proprietary Schools</u>	<u>Total</u>
Total Population	13	29	54	186	282
Population Surveyed	13	29	53	67	162
Responses Received	8	19	34	16	77
Agreed to Participate	8	17	25	14	64
Surveys Returned	8	11	21	6	46

Twenty-seven of the seventy-seven institutions reporting on the general status of planning indicated that strategic planning processes were implemented, this accounted for 35.1 percent.

Twenty-four of the seventy-seven institutions reported strategic planning processes were going to be implemented; this accounted for 31.2 per cent.

Twelve additional institutions indicated the benefits of strategic planning were being evaluated preparatory to making an implementation decision.

Combined, these three groups represented a strong interest in strategic planning, 76.6 percent of those responding; however, a much smaller number 35.1 percent were actually benefiting from the planning process.

A diverse list of titles was reflected for the survey coordinators selected by the presidents of participating institutions. These titles and the functions they represented were indicative of the status of strategic planning: twenty-seven presidents named themselves, others included; dean of instruction (7); provost (3); director of academic planning (3); director of institutional research (2); director/vice president for development (3) and a variety of other second and third level positions were named among the remaining nineteen coordinators.

Twenty-two of the forty-four institutions answered affirmatively the question, "Is a comprehensive document prepared periodically which is referred to as the plan?"

Budgeting methods favored by the institutions were: incremental, 50 percent; planning, programming and budgeting systems, 18.2 percent; zero-base, 15.9 percent; formula, 13.7 percent; and performance, 2.2 percent.

When asked how the budget process was related to long-range planning, 37.8 percent indicated no formal long-range plan was prepared; 24.4 percent indicated the same personnel were used but different processes were employed and planning for one period was not directly tied to other periods; 20 percent indicated they were integrated; and 17.8 percent indicated the processes were totally unrelated.

Central planning functions were used by 37.2 percent of the institutions and were generally positioned at the second level of the organization reporting to the first level. Where central planning functions existed, 59.1 percent of the institutions reported a staff of three or more.

When asked about decentralized planning functions where the activity, planning, was incorporated in position descriptions, 88.2 percent named finance; 73.5 percent named the provost's office and 67.6 percent named student services. Outside the central administration area department heads were named by 61.8 percent of the institutions and faculty by 26.5 percent as representing decentralized planning resources (when influence was considered, however, faculty was mentioned less frequently).

Budget information processing questions were of two types: 1) file organization and 2) system capability. Manual processing at the institutional level was reported by 37.2 percent of the institutions; data base facilities were available at 14.7 percent of the institutions. The range of responses indicated 4.2 percent had data base capability at the course level and 46.4 percent were processing information manually at the department level.

Long-range planning information processing responses indicated 60.7 percent used manual systems for financial planning compared with 14.3 percent employing data base systems. 71.4 percent reported using manual methods for the generation of academic plans compared with 7.1 percent having data base facilities.

Level of plan detail was greatest for the 1-3 year segment of the planning horizon, with few institutions reporting plans covering more than three years. Most plans were constructed using a high level of detail.

A further indication of planning style was the type, level of influence, and frequency of use of planning resources. All institutions favored internal resources over outside resources and top level administrators over middle management, faculty and staff. Student and alumni were rarely named, on a list of sixteen internal resources they held the lowest positions.

Questions relating to the institution's planning assumptions, premises, were most often designated as "not

applicable," only 62 percent answered this category of questions. The president, followed closely by the provost were the most frequent sources for planning assumptions. Lower levels of the organization and outside resources were rarely used and the focal point for assumptions on the planning horizon was the 1-3 year segment.

Assumption categories and types favored by the four postsecondary education groups reflected diversity in such areas as organization, dealings with both the internal and external environment, and forecasting perspective. When these preferences were combined with education indicator models it was possible to infer changes in mission and/or performance perspective.

A final aspect of planning style was investigated with a question on goal evolution. Three points are worth noting: 1) all groups showed interest in organizational development, 2) relatively little interest was shown in compensatory education 3) and several proprietary schools showed interest in becoming degree granting institutions.

The final area investigated by the empirical study was planning products: forecasts and strategies. When forecasts were available beyond 1983, trend assumptions prevailed. Twelve of the forty-six institutions were able to report 1987 forecasts for all data categories requested; twenty-five were able to report 1987 forecasts for one or more of the categories.

In summary, the survey reflected a limited number of institutions with a currently implemented long-range/strategic planning system. When planning systems were implemented the processes were fragmented and reflected limited participation in the planning process.

Conclusions

Analytical statements contained in this study relate to the data collected and are limited to the institutions submitting responses to the question or questions analyzed. Since all postsecondary educational institutions did not choose to participate, the data can only reflect the status of participants; this limitation is also true for each group. Nevertheless, the study attempted to describe in detail, as well as in comparative terms, the planning attributes identified by each participating institution, aggregated to one of the four referent groups.

Fourteen study assumptions were listed in Chapter I of this dissertation. Some could be addressed in a direct manner through an empirical study; others were approached indirectly, through theories, and constructs found in the literature reviewed in Chapter II. In some cases both the survey data and the literature provided useful and complimentary approaches. The constraints mentioned above, of course, apply to the assumptions evaluated using survey data, and the logic of the arguments developed through the review of literature apply to the conclusions reached for the balance.

1. Assumption: Postsecondary educational institutions recognize the need for long-range planning and many have developed their own strategic plans.

The postsecondary educational institutions surveyed did not report strong evidence of a recognition that planning is a vital activity for both improving organizational climate and ensuring its mission will be achieved with more optimum utilization of resources. Perhaps the most revealing finding was the relatively small number of institutions currently using strategic plans compared to the number responding to the survey. However, the number of institutions indicating interest in developing strategic plans was encouraging, and this interest should be recognized and encouraged.

2. Assumption: Many postsecondary educational institutions use a planning horizon which is greater than three years.

The survey did not confirm this assumption. Not only were those institutions reporting the availability of current plans small in number, but the limited planning horizon in use was also cause for concern by all who are interested in a strong postsecondary educational capability. Most institutions' planning horizon was three years or less, and, based on the availability of forecasts for key planning areas, it is not unlikely the practical horizon in use is measured in months rather than years. When this truncated planning perspective is combined with incremental budgeting,

performance criteria cannot be effectively used to maintain viable programs and eliminate those which are declining or marginal.

3. Assumption: Mission, role and scope will significantly influence the selection of planning criteria by the institution.

Both the domain mapping technique used to analyze the survey data, and the literature tend to confirm this assumption. However, the relatively small number of institutions' with plans and the very short planning horizons suggest some inconsistency between the institutions responses to questions concerning planning assumptions and the reality of planning practice, forecasts.

Mission, role and scope, seemed less important to the institutions than survival. While this might be expected in the strongly entrepreneurial group of proprietary schools, indicants of this tendency were also apparent in other groups as well. Greater attention to planning, of course, might well ensure survival by improving effectiveness in programs closely identified with mission.

4. Assumption: Assumptions about the future provide a "map" for strategic planning and policy making.

The domain maps of the four groups were surprisingly well balanced for institutions with rather sparsely implemented and often fragmented planning processes. Perhaps this positive view of mission, goal(s) and role(s) reflects what might be achieved with more widespread

planning, especially if that planning were accomplished using horizons measured in years rather than months.

5. Assumption: The type of indicator(s) selected by the institution in developing the assumption-set reflects leadership traits and environmental perspectives.

The possibility of institutions using lead education indicators to produce more viable plans and achieve some measure of unobtrusive statewide coordination was indicated by the study. Four education indicator models for filtering data supplied by environmental scanners and translated into assumptions by planning resource personnel were described: public colleges preferred the problem-oriented model; community colleges, non-public colleges and proprietary schools preferred the predictive model. The informative and program-evaluation models were selected less frequently. As noted in chapter IV the preference for the problem-oriented model by public colleges is not inconsistent with the type of information frequently sought for strategic planning processes.

Interestingly, no predictive educational indicators were found during the review of the literature; however, the publication Indicators III, previously cited, does make a modest attempt to provide information meeting the data criteria for the informative model. One conclusion stemming from this observation was that this information is not widely disseminated, nor is it published frequently enough to meet the needs of educators. Further, information

specifically oriented to Michigan would come closer to meeting the relevancy test for scanning.

If the concepts developed for social indicators have any validity, it is clear those theories could be applied to the Michigan education setting. Of course, there must be a spirit of cooperation on the part of users and confidence by both educational clients and publics alike in the integrity of systems using indicator methodology.

6. Assumption: The mission of the institution is closely related to the major segment, domain, of postsecondary education it serves, but this relationship is dynamic; that is, each major segment has a life cycle, as does each institution within that segment.

Planning in the institutions surveyed was clearly limited to a small number of senior administrators; nevertheless, the goal evolution question showed concern for three development areas: institution, program and staff. This finding was considered significant from a planning perspective. Greater participation by faculty and staff should result in more frequent and substantive testing of the congruence between the institution's mission and the educational needs of its service area.

According to the literature the mission of the institution must be challenged from time-to-time both from a directional and a substantive perspective. This is difficult without performance criteria and feedback for measuring performance. Of course, high-marks for

performance are meaningless if the mission and goals are wrong; this can only be determined through environmental scanning and an "open" system of communicating in a bi-directional manner. Somehow a collegial spirit must be incorporated in the planning process.

7. Assumption: Identifying those education indicators used by postsecondary institutions is required as one of several initial efforts to develop a uniform strategic planning system.

The study indicates wide-spread interest, if not the capability, in strategic planning among the institutions surveyed. The study also clearly shows that many, more than one third, of those institutions with a strategic planning capability do not regularly develop and test new planning assumptions. However, the concept of education indicators is viable and could be developed around the 63 percent of the institutions using assumptions. Procedurally, the change would be one of substituting published indicators for the intuitive or thinly developed assumptions of a few senior administrators. Importantly, the judgment of those administrators would not be diminished; rather it would be enhanced with more reliable data--scanning would still be required, but it could be opened up to a more diverse group.

Based on the review of literature it is clear that knowledge of the planning criteria used by postsecondary educational institutions is critical for the development of a coordinating system. There is, however, an important

distinction to be made. Although a uniform strategic planning system might not be considered desirable, a state system of education indicators supplying uniform planning information to the institutions, and supporting the return flow of assumptions educators were incorporating into their plans, based on the education indicators and statistics supplied by the system, is necessary for the development of compatible state policy. Structurally, the system could consist of three parts: educational indicators, supplied by a state agency; individual institution's planning assumptions based on their interpretation of the meaning of the educational indicators vis-a-vis their unique mission; and state legislation (policies).

8. Assumption: It is possible to develop a system for coordinating postsecondary education in Michigan, which is both effective and efficient in terms of satisfying a variety of learning needs and politically viable to assure continuity and public support.

The survey indicated a small but apparently viable nucleus of postsecondary educational institutions with both a planning capability and an interest in expanding that capability. Further, the literature supports the efficacy of the concept of planning assumptions leading to the development of a system of state education indicators. This approach appears to be possible using existing research developed for social indicators.

According to the literature the mission of the institution must be challenged from time-to-time both from a directional and a substantive perspective. This is difficult without performance criteria and feedback for measuring performance. Of course, high-marks for performance are meaningless if the mission and goals are wrong; this can only be determined through environmental scanning and an "open" system of communicating in a bi-directional manner. Somehow a collegial spirit must be incorporated in the planning process.

Need For Additional Research

The empirical study described in this dissertation was focused on the postsecondary education institution, other members of the organizational-set, such as the State Legislature were not included. Their importance, however, was established in the review of literature. Each of the following assumptions deal with these members and/or their relations with educational institutions, and could be the subject of an empirical study to test the assumption and its treatment in the literature vis-a-vis the environment found in the State of Michigan.

9. Assumption: Coordination of postsecondary education at the state level is possible through the utilization of budgeting processes and lead education indicators to effect public policies by the legislature, which are designed to maintain a dynamic equilibrium between supply and demand for educational "goods."

The review of the literature revealed that a system for performance/need evaluation, supported by a wide variety of special interests within the state, is, perhaps, the only viable approach to coordination of postsecondary education in Michigan. It is clear, organization solutions will only exacerbate the very problems a newly created agency or commission was intended to cure. Each new layer of organization will seek to "stake-out" its share of "autonomy." This action reduces the "autonomy" of those organizations, state and institutional, interfacing with the new entity. Since the "autonomy" of any organizational set is finite, what one member gains must be reflected in losses for one or more of the others.

10. Assumption: The State Legislature and the governing boards for state institutions would agree that some degree of coordination is both reasonable and desirable.

The literature (Parsons) would tend to support this assumption. The problem occurs at the management level. Both institutional managers (presidents) and agency managers (directors) might equate coordination with loss of autonomy. If this happens, each would tend to reduce the flow of information (Frey) so as to preserve as much autonomy as possible. With constitutional protection, however, it is likely state educational institutions would be more successful in restricting information flows than the agency. The Legislature, of course, could change that balance, with a stalemate resulting.

11. Assumption: All parties participating in the planning process, including private institutions, are, or could be, motivated to join in a cooperative effort to improve the utilization of postsecondary education facilities.

This assumption appears to have no support in the literature. Because of the turbulence and perceived threat of extinction, all but the most powerful could be intimidated, notwithstanding the constitutional protection some enjoy. It is this uneven distribution of power that makes voluntary cooperation difficult and mandated cooperation impossible. The solution must be found in a combination of effective political processes and "statesmanship" on the part of institutional leaders.

12. Assumption: Statewide planning coordination to be viable, must be both effective and transparent, vis. the "autonomy" of each participating institution.

This assumption is easily the most defensible of any presented in this study, both organization theory and education literature would tend to confirm its validity. The key to effecting a climate where these conditions could exist is contingent upon the acceptance of the concept selective interdependence, by all the members of the postsecondary education organizational-set.

13. Assumption: The ultimate purpose of postsecondary education coordination is the formulation of compatible policies by all members of the organization-set,

and without public policies promoting coordination, it cannot be achieved.

This assumption has some support in the literature. Statewide coordination, for instance, when accepted by all the parties, has achieved a measure of success in other states; and some would argue those positive experiences could be replicated in Michigan; so why try solutions which have no record of success? The answer is embedded in the historical roots of autonomy as a political issue in the State of Michigan. Public policy, statesmanship and a reliable system of education indicators (or some other systemic approach) could combine to effect a viable solution; the alternative is a state system imposed by a disgruntled public through a constitutional amendment.

14. Assumption: A uniform strategic planning system for postsecondary education institutions is possible and desirable.

The planning literature supports the notion that use of a strategic planning system is desirable for every postsecondary educational institution, and a generic system could be developed for those institutions wishing to use it (this might encourage many to plan that might not otherwise do so due to a perceived scarcity of resources); however, since diversity is valued in Michigan, a uniform planning system would probably operate at cross purposes to that philosophy if it were adopted by all institutions (the probabilities of such an occurrence are small if there are any at all).

Organizational context and management style establish the limits for both quality and scope of the planning process. Organization climate sets the limit for planning outcomes. Low levels of planning skills may prevent the institution from reaching those limits, but even the most superior skills will not allow it to exceed them.

Planning does not appear to enjoy a very high priority at many of the institutions surveyed. The source for some portion of the apathy felt by administrators toward planning stems from the literature of a decade ago admonishing the administrator for not using modeling techniques to produce formal comprehensive plans. Many took this advice and found the models didn't work and the plans, if completed, were always out-of-date. When such experiences are combined with the turbulent environment found in Michigan during this same period, these attitudes can be understood if not accepted.

Turbulent environments, however, are a reason to plan. In fact, if survival is important, planning is imperative. As the incidence of change accelerates, so must planning systems become more responsive. The homogeneous structure of some institutions must give way to open systems, more resources must be made accessible to planners; planners must be known to those resources and both must understand the mission, goal(s) and role(s) of the institution (even if they change as rapidly as the environment).

If this assessment of the planning process, is close to reality in many institutions, then the problem of statewide planning responsibility should be considered. Planning skills must be present at the institutional level first for statewide coordination to have a chance of success. Central planning, for a statewide educational system might work from a procedural perspective, but in a state with a long history of "autonomy," it is unlikely it would produce substantive, positive results.

Successful coordination of Michigan's postsecondary educational institutions is unlikely to occur if it is approached through organizational solutions. More tightly coupled organizational-sets will build more effective systems immune to change, in the name of survival. It is equally true that improved planning processes are unlikely to be implemented if the initiative for their development is left to the institutions. It would seem that both the autonomy model and the statewide coordination model will fall short of producing the planning systems necessary to satisfy the postsecondary educational needs of the state. What is needed is a new model reflecting selective interdependence which the institutions will accept, and state policy makers can incorporate in the state's political process.

First, however, the findings of this study must be verified. Each of the groups studied should conduct a comprehensive survey of all member institutions to determine

what planning processes are implemented, and catalogue the planning assumptions used and the source of the education indicators on which they were based, if any. A reasonable vehicle for effecting such studies is the state association which represents the interests of the members of each of the four groups studied: Presidents' Council of State Colleges and Universities; Michigan Community College Association; Association of Independent Colleges and Universities; and Michigan Organization of Private Vocational Schools.

Implications for Postsecondary Education
In the State of Michigan

The environmental stage is set for confrontation between members of the postsecondary education organizational-set in the State of Michigan. Resources are scarce. Enrollment is declining and will continue to decline for several years. The mission of each institution may not be as clear to all members, publics and clients as it once was. The environment is more tightly coupled, and the long-standing political issue of institutional autonomy is likely to emerge again. The restructuring of postsecondary educational facilities in the public sector may very well result from a combination of these factors and demands for a more equitable distribution of state resources by advocates for social services, prison reform, conservationists and dozens of other special interests.

Changes in the quantity and quality of postsecondary educational facilities and programs may be long over due,

but if they stem from the type of pressures noted above the result may be less than optimal. In fact, the potential for divisiveness as each institution and its constituents maneuver to gain some advantage, could not only damage the image of public institutions it could reflect adversely on private institutions as well.

Those institutions with well developed plans and strategies should be in a better position to defend their position than institutions with less evidence of viability. However, where a large number of institutions are unable to present carefully reasoned positions in support of their continuity, the restructuring will, by default, turn to political processes, and those institutions selected for survival may very well not be the best choice for the long term interests of the state.

Postsecondary educational institutions are an important resource. Great care should go into preserving these assets which are so vital and in which such a large public investment has been made. Of course, all investments must be measured periodically to determine which should be maintained, increased or liquidated.

Performance criteria for educational institutions should be based on the potential to render service and not on "profit." But in order to gain agreement on this point performance must be measurable. Yet, few standards are available. This may be one reason why such a large number of institutions have failed to develop strong, well defined

planning processes. Plans require feed-back; the ability to answer the question, "how well are we doing?" is integral to the planning process.

This dissertation was interested in indentifying institutions that plan, determining how they plan and their level of interest in the planning process. This concern stemmed from the long standing debate between advocates for institutional autonomy and statewide planning. Each side seemed to accept, as a given the existence of planning, the controversy centered on outcomes. This study has questioned that assumption, and provided some evidence to doubt its validity. This study also presented evidence, through a review of the literature, which suggested that autonomy is not absolute but relative, and statewide planning may not represent a viable alternative in the State of Michigan.

It has been suggested that a system of educational indicators be developed for use by all postsecondary education institutions in the state. This system could provide performance criteria for the institution in terms of both needs and outcomes; it could focus attention on problem areas requiring remediation avoiding subjective and devisive studies to fix blame for educational problems; and finally, it could provide a basis for informed policy formulation by the State legislature on matters of importance to postsecondary educational institutions.

Closing Comment

There are several alternative strategies for improving the educational climate in Michigan, and planning is but one aspect, although, an integral component of each. The recommended alternative to the autonomy model and the statewide coordination model may not produce better results. One certainty, however, is that blindly clinging to the notion that educational organizations are autonomous, in any absolute sense, will produce a model system of "autonomy," and a second rate educational system. Planning systems driven by education indicators may be a reasonable alternative.

APPENDIX A
SURVEY DATA

RETURN ANALYSIS

TYPE OF INSTITUTION

QUESTION	PUBLIC COLLEGES					COMMUNITY COLLEGES					NONPUBLIC COLLEGES					PROPRIETARY SCHOOLS					TOTAL				
	1	2	3	4	5*	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
	13	13	8	8	100%	29	29	11	11	100%	53	53	21	20	95%	186	67	6	6	100%	281	162	46	45	98%
1																									
2A				8	100				10	91				14	67			6	100					38	83
B				6	75				10	91				13	62			5	83					34	74
C				4	50				9	82				11	52			5	83					29	63
3A				4	50				10	91				15	71			5	83					34	74
B				3	38				8	73				9	43			2	33					21	46
4				5	63				10	91				14	67			5	83					34	74
5A				5	63				10	91				13	62			5	83					33	72
B				5	63				10	91				13	62			5	83					33	72
6A				5	63				9	82				13	62			5	83					32	70
B				4	50				8	73				12	57			5	83					29	63
C				4	50				8	73				12	57			5	83					29	63
D				4	50				8	73				12	57			5	83					29	63
E				3	38				8	73				13	62			4	67					28	61
7				3	38				8	73				13	62			5	83					29	63
8A				6	75				10	91				18	86			5	83					39	85
B				6	75				10	91				17	81			5	83					38	83

1. TOTAL INSTITUTIONS IN CATEGORY

2. TOTAL INSTITUTIONS SURVEYED

3. TOTAL INSTITUTIONS RETURNING COMPREHENSIVE INSTRUMENT

4. TOTAL INSTITUTIONS COMPLETING QUESTION

5. % OF RETURNED INSTRUMENTS

* ONE INSTITUTION SENT COPY OF LONG-RANGE PLAN BUT DI NOT WISH TO COMPLETE RESEARCH INSTRUMENT

** % OF INSTITUTIONS RETURNING INSTRUMENT

TABLE A.P.1.

SURVEY SUMMARY: PRELIMINARY

	INSTITUTION CATEGORY			
	<u>PUBLIC COLLEGES</u>	<u>COMMUNITY COLLEGES</u>	<u>NONPUBLIC COLLEGES</u>	<u>PROPRIETARY SCHOOLS</u>
INSTITUTIONS IN CATEGORY	13	29	54	186
INSTITUTIONS SURVEYED	13	29	53	67
INSTITUTIONS RESPONDING	8	19	33	16
PERCENT	61.5	65.5	62.3	23.9
 <u>SURVEY COORDINATOR:</u>				
PRESIDENT	25.0%	52.4%	45.4%	56.3%
DIRECTOR/OWNER				37.5
PROVOST	12.5	-	9.1	-
DEAN	12.5	26.4	15.2	-
VICE PRESIDENT, ADMINISTRATION	-	-	9.1	-
DIRECTOR BUDGET/PLANNING/RESEARCH	37.5	10.6	9.1	-
OTHER ADMINISTRATIVE	12.5	10.6	12.1	6.2
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>
 <u>PLANNING STATUS</u>				
CURRENTLY USING STRATEGIC PLANNING	37.5%	52.6%	27.3%	31.3%
PREPARING/IMPLEMENTING STRATEGIC PLAN.	50.0	21.0	27.3	25.0
EVALUATING STRATEGIC PLANNING	-	10.5	12.1	12.5
NO INTEREST IN STRATEGIC PLANNING	12.5	5.3	9.1	6.25
NO NEED FOR STRATEGIC PLANNING	-	-	-	6.25
UNDETERMINED	-	15.8	24.2	18.7
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>
 <u>NUMBER PARTICIPATING IN</u>				
COMPREHENSIVE SURVEY	8	17	25	14
<u>NUMBER RETURNING COMPREHENSIVE</u>				
SURVEY	8	11	21	6
	<u>100.0%</u>	<u>64.7%</u>	<u>84.0%</u>	<u>42.9%</u>
OF INSTITUTIONS RESPONDING	62.0	58.0	64.0	38.0
OF INSTITUTIONS SURVEYED	62.0	38.0	40.0	9.0
OF INSTITUTIONS IN CATEGORY	62.0	38.0	39.0	3.0

TABLE A.P.2.

SURVEY COORDINATOR
TITLES

NONPUBLIC COLLEGES

- (9) PRESIDENT
- (2) PROVOST
- (2) ACADEMIC DEAN
- (2) DEAN
- (1) DEAN, ADMINISTRATIVE SERVICES
- (1) VICE PRESIDENT FOR PLANS AND OPERATIONS
- (1) VICE PRESIDENT, DEVELOPMENT
- (1) VICE PRESIDENT
- (1) DIRECTOR OF PLANNING AND RESEARCH
- (1) DIRECTOR OF THE ADVISING AND CAREER
DEVELOPMENT CENTER AND COLLEGE
PLANNING COORDINATOR
- (1) ASSISTANT TO THE PRESIDENT FOR
MANAGEMENT INFORMATION AND
PLANNING
- (1) LONG RANGE PLANNING FACILITATOR
- (1) PROGRAM COORDINATOR
- (1) GRANTS COORDINATOR

PUBLIC COLLEGES

- (2) PRESIDENT
- (1) PROVOST
- (1) DEAN OF INSTRUCTION
- (1) DIRECTOR OF INSTITUTIONAL RESEARCH
- (1) DIRECTOR, ACADEMIC PLANNING AND
ANALYSIS
- (1) ASSOCIATE VICE PRESIDENT FOR STATE
RELATIONS

COMMUNITY COLLEGES

- (9) PRESIDENT
- (1) DEAN, INSTRUCTIONAL SERVICES
- (1) VICE PRESIDENT FOR INSTRUCTIONAL AFFAIRS
- (1) VICE PRESIDENT
- (1) DIRECTOR, INSTITUTIONAL AND MANAGEMENT
STUDIES
- (1) DIRECTOR OF PLANNING AND ADMINISTRATIVE
INFORMATION SYSTEMS
- (1) DIRECTOR, ECONOMIC DEVELOPMENT NETWORK
- (1) DIRECTOR OF DEVELOPMENT

PROPRIETARY SCHOOLS

- (6) PRESIDENT
- (1) EXECUTIVE DIRECTOR
- (1) VICE PRESIDENT
- (1) DIRECTOR
- (1) OWNER
- (1) ADMINISTRATOR
- (1) DIRECTOR OF COMMUNICATIONS
- (1) ADMINISTRATOR
- (1) BURSAR

QUESTION 1: INTEGRATING BUDGETING AND LONG-RANGE PLANNING

ITEM	PUBLIC COLLEGES		COMMUNITY COLLEGES		NONPUBLIC COLLEGES		PROPRIETARY SCHOOLS		TOTAL	
o FISCAL PERIOD :JULY - JUNE	7	87.5%	11	100.0%	14	70.0%	0	- %	32	71.1%
OCT. - SEPT.	1	12.5	0	-	0	-	1	16.7	2	4.4
JAN. - DEC.	0	-	0	-	1	5.0	2	33.3	3	6.7
OTHER	0	-	0	-	5	25.0	3	50.0	8	17.8
o FUNDS COMMITTED FULL BUDGET PERIOD, YES:	8	100.0	10	100.0	18	94.7	5	83.3	41	95.3
NO :	0	-	0	-	1	5.3	1	16.7	2	4.7
o FUNDS COMMITTED BEYOND BUDGET PERIOD, YES:	1	12.5	2	20.0	3	17.6	2	4.0	8	20.0
NO :	7	87.5	8	80.0	14	82.4	3	6.0	32	80.0
o BUDGET METHOD, INCREMENTAL:	5	62.5	6	54.5	10	52.6	1	16.7	22	50.0
FORMULA :	1	12.5	0	-	4	21.1	1	16.7	6	13.7
P.P. & B.S.:	2	25.0	4	36.4	2	10.5	0	-	8	18.2
ZERO-BASE :	0	-	1	9.1	2	10.5	4	66.6	7	15.9
PERFORMANCE:	0	-	0	-	1	5.3	0	-	1	2.2
o RELATIONSHIP BETWEEN BUDGETING AND LONG-RANGE PLANNING,										
INTEGRATED :	0	-	3	27.2	4	20.0	2	33.3	9	20.0
SIMILAR :	1	12.5	4	36.4	5	25.0	1	16.7	11	24.4
UNRELATED :	1	12.5	0	-	1	5.0	0	-	2	4.4
UNRELATED/COMMITTEE:	2	25.0	0	-	4	20.0	0	-	6	13.4
NO LONG-RANGE PLAN :	4	50.0	4	36.4	6	30.0	3	50.0	17	37.8
o CENTRAL PLANNING FUNCTION,										
YES:	3	37.5	4	36.4	9	45.0	0	-	16	37.2
NO :	5	62.5	7	63.6	11	55.0	4	100.0	27	62.8
o COMPREHENSIVE PLANNING DOCUMENT,										
YES:	2	25.0	5	45.5	13	65.0	2	40.0	22	50.0
NO :	6	75.0	6	54.5	7	35.0	3	60.0	22	50.0
o DYNAMIC PROCESS WITHOUT DOCUMENT,										
YES:	6	14.3	7	70.0	14	70.0	2	50.0	29	70.7
NO :	1	85.7	3	30.0	6	30.0	2	50.0	12	29.3

TABLE A.1-.1.

QUESTION 2A ORGANIZATION: PLANNING STRUCTURE

ITEM		PUBLIC COLLEGES	COMMUNITY COLLEGES	NONPUBLIC COLLEGES	PROPRIETARY SCHOOLS	TOTAL
o CENTRAL PLANNING FUNCTION,						
	YES:	3 50.0%	6 60.0%	9 64.3%	4 80.0%	22 62.9%
	NO :	3 50.0	4 40.0	5 35.7	1 20.0	13 37.1
IF YES, FEWER THAN THREE EMP:		1 33.3	2 33.3	4 44.4	2 50.0	9 40.9
MORE THAN THREE EMP:		2 66.7	4 66.6	5 55.6	2 50.0	13 59.1
o ORGANIZATION LEVEL WHERE LOCATED,						
	1:	0 -	3 60.0	2 22.2	- -	5 14.3
	2:	2 66.7	1 20.0	4 44.4	2 50.0	9 25.7
	3:	1 33.3	1 20.0	1 11.1	1 25.0	4 11.4
	4:	0 -	0 -	2 22.2	1 25.0	3 8.6
REPORTS TO LEVEL,	0:	- -	3 50.0	1 11.1	1 25.0	5 14.3
	1:	2 66.7	3 50.0	7 77.8	3 75.0	15 42.9
	2:	1 33.3	- -	- -	- -	1 2.9
	3:	- -	- -	- -	- -	- -
	4:	- -	- -	- -	- -	- -
	5:	- -	- -	1 11.1	- -	1 2.9

(% = ONLY THOSE ANSWERING QUESTION)

TABLE A.2A.1.

QUESTION 2B ORGANIZATION: PLANNING STRUCTURE

ITEM		PUBLIC COLLEGES	COMMUNITY COLLEGES	NONPUBLIC COLLEGES	PROPRIETARY SCHOOLS	TOTAL
o IN CONSULTATION WITH						
ADMINISTRATION,						
FINANCE	:	6 100.0%	10 100.0%	12 92.3%	2 40.0	30 88.2%
OPERATIONS	:	5 83.3	6 60.0	7 53.8	3 60.0	21 61.8
REGISTRAR	:	2 33.3	4 40.0	7 53.8	1 20.0	14 41.2
STUDENT SERVICES	:	4 66.6	8 80.0	10 76.9	1 20.0	23 67.6
OTHER	:	2 33.3	2 20.0	3 23.1	0 -	7 20.6
ACADEMIC,						
V.P./PROVOST	:	5 83.3	8 80.0	11 84.6	1 20.0	25 73.5
DEAN(S)	:	5 83.3	2 20.0	5 38.5	0 -	12 35.3
DEPT. HEADS	:	4 66.6	8 80.0	7 53.8	2 40.0	21 61.8
FACULTY	:	2 33.3	4 40.0	3 23.1	0 -	9 26.5
OTHER	:	1 16.6	0 -	0 -	0 -	1 2.9
RESEACH,						
VICE PRESIDENT	:	3 50.0	1 10.0	2 15.4	0 -	6 17.6
DEAN(S)	:	2 33.3	0 -	0 -	0 -	2 5.9
DEPT. HEADS	:	2 33.3	1 10.0	1 7.7	1 20.0	5 14.7
FACULTY	:	0 -	0 -	1 7.7	0 -	1 2.9
OTHER	:	1 16.6	1 10.0	1 7.7	1 20.0	4 11.8

(% = ONLY THOSE ANSWERING QUESTION)

TABLE A.2B.1.

QUESTION 2C PLAN(S) STATUS AND REVISION POLICY

PLAN TYPE	HORIZON	PUBLIC COLLEGES		COMMUNITY COLLEGES		NONPUBLIC COLLEGES		PROPRIETARY SCHOOLS		TOTAL	
STRATEGIC	1-3 YRS.	1	25.0%	6	66.7%	1	9.1%	4	80.0%	12	41.4%
	4-9 YRS.	3	75.0	3	33.3	10	90.9	1	20.0	17	58.6
	10 + YRS.	0	-	0	-	0	-	0	-	0	-
	<u>AGE OF</u>										
	1 YR OR LESS	3	75.0	7	77.8	6	54.5	4	80.0	20	69.0
	1-2 YRS.	0	-	0	-	1	9.1	1	20.0	2	6.9
	2-4 YRS.	0	-	0	-	3	27.3	0	-	3	10.3
	4-5 YRS.	0	-	1	11.1	0	-	0	-	1	3.5
	MORE	1	25.0	1	11.1	1	9.1	0	-	3	10.3
	<u>REV. POL.</u>										
	CONTINUOUS	1	25.0	3	33.4	4	36.4	2	40.0	10	34.5
	BIANNUALLY	0	-	1	11.1	0	-	0	-	1	3.4
	ANNUALLY	1	25.0	3	33.3	6	54.5	0	-	10	34.5
	2-5 YRS.	0	-	1	11.1	0	-	0	-	1	3.4
	NO SCHEDULE	2	50.0	1	11.1	1	9.1	3	60.0	7	24.2

TABLE A.2C.1.1

QUESTION 2C PLAN(S) STATUS AND REVISION POLICY

PLAN TYPE	HORIZON	PUBLIC COLLEGES	COMMUNITY COLLEGES	NONPUBLIC COLLEGES	PROPRIETARY SCHOOLS	TOTAL
FINANCIAL	1-3 YRS.	2 100.0	5 71.4	1 12.5	4 100.0	12 57.1
	4-9 YRS.	0 -	2 28.6	7 87.5	0 -	9 42.9
	10 + YRS.	0 -	0 -	0 -	0 -	0 -
	<u>AGE OF</u>					
	1 YR OR LESS	2 100.0	6 85.7	5 62.5	3 75.0	16 76.1
	1-2 YRS.	0 -	0 -	1 12.5	1 25.0	2 9.5
	2-4 YRS.	0 -	0 -	1 12.5	0 -	1 4.8
	4-5 YRS.	0 -	0 -	1 12.5	0 -	1 4.8
	MORE	0 -	1 14.3	0 -	0 -	1 4.8
	<u>REV. POL</u>					
	CONTINUOUS	1 50.0	3 42.9	5 62.5	2 50.0	11 52.4
	BIANNUALLY	0 -	1 14.2	0 -	0 -	1 4.8
	ANNUALLY	0 -	3 42.9	2 25.0	0 -	5 2.4
	2-5 YRS.	0 -	0 -	0 -	0 -	0 -
	NO SCHEDULE	1 50.0	0 -	1 12.5	2 50.0	4 19.4

TABLE A.2C.1.2

QUESTION 2C PLAN(S) STATUS AND REVISION POLICY

PLAN TYPE	HORIZON	PUBLIC COLLEGES		COMMUNITY COLLEGES		NONPUBLIC COLLEGES		PROPRIETARY SCHOOLS		TOTAL	
ACADEMIC	1-3 YRS.	1	50.0	6	85.7	2	25.0	3	75.0	12	57.1
	4-9 YRS.	1	50.0	1	14.3	6	75.0	1	25.0	9	42.9
	10 + YRS.	0	-	0	-	0	-	0	-	0	-
	<u>AGE OF</u>										
	1 YR OR LESS	2	100.0	7	100.0	2	25.0	3	75.0	14	66.6
	1-2 YRS.	0	-	0	-	2	25.0	1	25.0	3	14.3
	2-4 YRS.	0	-	0	-	3	37.5	0	-	3	14.3
	4-5 YRS.	0	-	0	-	1	12.5	0	-	1	4.8
	MORE	0	-	0	-	0	-	0	-	0	-
	<u>REV. POL.</u>										
	CONTINUOUS	0	-	3	42.9	5	62.5	2	50.0	10	47.6
	BIANNUALLY	0	-	1	14.2	0	-	0	-	1	4.8
	ANNUALLY	1	50.0	3	42.9	2	25.0	0	-	6	28.6
	2-5 YRS.	0	-	0	-	0	-	0	-	0	-
	NO SCHEDULE	1	50.0	0	-	1	12.5	2	50.0	4	19.0

QUESTION 2C PLAN(S) STATUS AND REVISION POLICY

PLAN TYPE	HORIZON	PUBLIC COLLEGES	COMMUNITY COLLEGES	NONPUBLIC COLLEGES	PROPRIETARY SCHOOLS	TOTAL
RESEARCH	1-3 YRS.	0 -	3 100.0	0 -	3 75.0	6 75.0
	4-9 YRS.	1 100.0	0 -	0 -	1 25.0	2 25.0
	10 + YRS.	0 -	0 -	0 -	0 -	0 -
	<u>AGE OF</u>					
	1 YR OR LESS	1 100.0	3 100.0	0 -	3 75.0	7 87.5
	1-2 YRS.	0 -	0 -	0 -	0 -	0 -
	2-4 YRS.	0 -	0 -	0 -	1 25.0	1 12.5
	4-5 YRS.	0 -	0 -	0 -	0 -	0 -
	MORE	0 -	0 -	0 -	0 -	0 -
	<u>REV. POL.</u>					
	CONTINUOUS	0 -	1 33.4	0 -	2 50.0	3 37.5
	BIANNUALLY	1 -	1 33.4	0 -	0 -	1 12.5
	ANNUALLY	1 100.0	1 33.4	0 -	0 -	2 25.0
	2-5 YRS.	0 -	0 -	0 -	0 -	0 -
	NO SCHEDULE	0 -	0 -	0 -	2 50.0	2 25.0

TABLE A.2C.1.4.

QUESTION 2C PLAN(S) STATUS AND REVISION POLICY

PLAN TYPE	HORIZON	PUBLIC COLLEGES	COMMUNITY COLLEGES	NONPUBLIC COLLEGES	PROPRIETARY SCHOOLS	TOTAL
FACILITIES	1-3 YRS.	1 50.0	2 33.3	3 42.9	3 100.0	9 50.0
	4-9 YRS.	0 -	4 67.7	4 57.1	0 -	8 44.4
	10 + YRS.	1 50.0	0 -	0 -	0 -	1 5.6
	<u>AGE OF</u>					
	1 YR OR LESS	2 100.0	5 83.3	4 57.1	3 100.0	14 77.8
	1-2 YRS.	0 -	0 -	2 28.6	0 -	2 11.1
	2-4 YRS.	0 -	0 -	0 -	0 -	0 -
	4-5 YRS.	0 -	0 -	0 -	0 -	0 -
	MORE	0 -	1 16.7	1 14.3	0 -	2 11.1
	<u>REV. POL.</u>					
	CONTINUOUS	0 -	2 25.0	4 57.1	1 33.3	7 38.9
	BIANNUALLY	0 -	1 12.5	0 -	0 -	1 5.6
	ANNUALLY	1 50.0	1 12.5	2 28.6	0 -	4 2.2
	2-5 YRS.	0 -	2 25.0	0 -	0 -	2 1.1
	NO SCHEDULE	1 50.0	0 -	1 14.3	2 67.7	4 2.2

TABLE A.2C.1.5.

QUESTION 2C PLAN(S) STATUS AND REVISION POLICY

PLAN TYPE	HORIZON	PUBLIC COLLEGES	COMMUNITY COLLEGES	NONPUBLIC COLLEGES	PROPRIETARY SCHOOLS	TOTAL
COMMUNITY SERVICE	1-3 YRS.	0 -	6 100.0	2 50.0	3 100.0	11 78.6
	4-9 YRS.	1 100.0	0 -	2 50.0	0 -	3 21.4
	10 + YRS.	0 -	0 -	0 -	0 -	0 -
	AGE OF					
	1 YR OR LESS	1 100.0	6 100.0	3 75.0	3 100.0	13 92.9
	1-2 YRS.	0 -	0 -	0 -	0 -	0 -
	2-4 YRS.	0 -	0 -	0 -	0 -	0 -
	4-5 YRS.	0 -	0 -	1 25.0	0 -	1 7.1
	MORE	0 -	0 -	0 -	0 -	0 -
	REV. POL.					
	CONTINUOUS	0 -	3 50.0	3 75.0	1 33.3	7 50.0
	BIANNUALLY	0 -	1 16.7	0 -	0 -	1 7.1
	ANNUALLY	1 100.0	2 33.3	1 25.0	0 -	4 28.6
	2-5 YRS.	0 -	0 -	0 -	0 -	0 -
	NO SCHEDULE	0 -	0 -	0 -	2 66.7	2 14.3

QUESTION 3A MECHANIZATION

ITEM		PUBLIC COLLEGES	COMMUNITY COLLEGES	NONPUBLIC COLLEGES	PROPRIETARY SCHOOLS	TOTAL
PLANNING						
STRATEGIC,	DATA BASE	- - %	3 30.0%	1 7.7%	- %	4 12.9%
	INTEGRATED FILES	1 33.4	2 20.0	1 7.7	-	4 12.9
	COMPUTER ASS'T.	1 33.3	- -	4 30.8	-	5 16.1
	MANUAL	1 33.3	5 50.0	7 53.8	5 100.0	18 58.1
FINANCIAL,	DATA BASE	- -	3 33.3	1 8.3	- -	4 14.3
	INTEGRATED FILES	1 33.4	1 11.1	- -	- -	2 7.1
	COMPUTER ASS'T.	1 33.3	1 11.1	3 25.0	- -	5 17.9
	MANUAL	1 33.3	4 44.5	8 66.7	4 100.0	17 60.7
ACADEMIC,	DATA BASE	- -	2 22.2	- -	- -	2 7.1
	INTEGRATED FILES	- -	2 22.2	- -	- -	2 7.1
	COMPUTER ASS'T.	1 33.3	- -	3 25.0	- -	4 14.4
	MANUAL	2 66.7	5 55.6	9 75.0	4 100.0	20 71.4
RESEARCH,	DATA BASE	- -	1 20.0	- -	- -	1 6.7
	INTEGRATED FILES	- -	2 40.00	- -	- -	2 13.3
	COMPUTER ASS'T.	- -	- -	- -	- -	0 -
	MANUAL	2 100.0	2 40.0	5 100.0	3 100.0	12 80.0
FACILITIES,	DATA BASE	- -	2 22.2	- -	- -	2 7.4
	INTEGRATED FILES	- -	2 22.2	- -	- -	2 7.4
	COMPUTER ASS'T.	1 33.3	- -	1 9.1	- -	2 7.4
	MANUAL	2 66.7	5 55.6	10 90.9	4 100.0	21 77.8
COMMUNITY SERVICE,	DATA BASE	- -	1 14.3	- -	- -	1 7.1
	INTEGRATED FILES	- -	2 28.6	- -	- -	2 14.3
	COMPUTER ASS'T.	- -	- -	- -	- -	0 -
	MANUAL	2 100.0	4 57.1	3 100.0	2 100.0	11 78.6

TABLE A.3A.1.1.

QUESTION 3A MECHANIZATION

ITEM		PUBLIC COLLEGES	COMMUNITY COLLEGES	NONPUBLIC COLLEGES	PROPRIETARY SCHOOLS	TOTAL
BUDGETING						
INSTITUTION, DATA BASE	1	25.0%	4 40.0%	- - %	- - %	5 14.7%
INTEGRATED FILES	1	25.0	1 10.0	2 13.0	- -	4 11.8
COMPUTER ASS'T.	2	50.0	3 30.0	5 33.3	2 40.0	12 35.3
MANUAL	-	-	2 20.0	8 53.0	3 60.0	13 37.2
COLLEGE, DATA BASE	1	25.0	- -	- -	- -	1 20.0
INTEGRATED FILES	1	25.0	- -	- -	- -	1 20.0
COMPUTER ASS'T	1	25.0	- -	- -	- -	1 20.0
MANUAL	1	25.0	- -	1 7.0	- -	2 40.0
DEPARTMENT, DATA BASE	1	25.0	2 20.0	- -	- -	3 10.7
INTEGRATED FILES	1	25.0	2 20.0	1 7.0	- -	4 14.3
COMPUTER ASS'T	1	25.0	4 40.0	2 13.0	1 20.0	8 28.6
MANUAL	1	25.0	2 20.0	10 67.0	- -	13 46.4
PROGRAM, DATA BASE	-	-	1 10.0	- -	- -	1 3.6
INTEGRATED FILES	-	-	3 30.0	1 7.0	- -	4 14.3
COMPUTER ASS'T	1	25.0	4 40.0	2 13.0	1 20.0	8 28.6
MANUAL	2	50.0	2 20.0	9 60.0	2 40.0	15 53.5
PROJECT, DATA BASE	1	25.0	1 10.0	- -	- -	2 8.0
INTEGRATED FILES	-	-	2 20.0	1 7.0	- -	3 12.0
COMPUTER ASS'T	-	-	3 30.0	2 13.0	1 20.0	6 24.0
MANUAL	2	50.0	3 30.0	9 60.0	- -	14 56.0
COURSE, DATA BASE	-	-	1 10.0	- -	- -	1 4.2
INTEGRATED FILES	-	-	2 20.0	1 7.0	- -	3 12.5
COMPUTER ASS'T	-	-	3 30.0	1 7.0	1 20.0	5 20.8
MANUAL	2	50.0	3 30.0	9 60.0	1 20.0	15 62.5
N =		4	10	15	5	

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TABLE A.3A.1.2.

QUESTION 3B HARDWARE/SOFTWARE

ITEM		<u>PUBLIC COLLEGES</u>	<u>COMMUNITY COLLEGES</u>	<u>NONPUBLIC COLLEGES</u>	<u>PROPRIETARY SCHOOLS</u>	<u>TOTAL</u>
HARDWARE						
MAIN FRAME	- AMDAHL CORPORATION	1	-	-	-	1)
	- DIGITAL EQUIPMENT	1	-	-	-	1)
	- HONEYWELL	-	1	-	-	1) 5
	- IBM	1	-	-	-	1)
	- UNIVAC	-	1	-	-	1)
MINI	- BURROUGHS	-	1	-	-	1)
	- DIGITAL EQUIPMENT	-	1	3	-	4)
	- HONEYWELL	-	1	1	-	2) 15
	- IBM	-	3	3	-	6)
	- PRIME	-	-	1	-	1)
	- XEROX	-	-	1	-	1)
MICRO	- APPLE	1	-	-	-	1)
	- IBM	1	-	-	-	1) 3
	- OSBORNE	1	-	-	-	1)
SOFTWARE (PROPRIETARY)						
VENDOR	- EDUCATION MGT. SYS.	-	-	-	2	2
	- HONEYWELL	-	1	-	-	1
	- QUODATA	-	-	1	-	1
N =		3	8	9	2	

TABLE A.3B.1.

QUESTION 4 PLAN DETAIL

PLANNING HORIZON (YRS.) PLANNING AREA	PUBLIC COLLEGES			COMMUNITY COLLEGES			NONPUBLIC COLLEGES			PROPRIETARY SCHOOLS			TOTAL		
	1/3	4/9	10+	1/3	4/9	10+	1/3	4/9	10+	1/3	4/9	10+	1/3	4/9	10+
A. FINANCIAL															
- LINE ITEM DETAIL, SAME AS BUDGET	4	-	-	8	-	-	12	1	-	3	-	-	27	1	-
- AGGREGATED TO MAJOR BUDGET CATEGORIES	-	1	-	2	2	-	1	5	-	-	-	-	3	8	-
- DETAILED, BUT UNRELATED TO BUDGET	-	-	-	-	-	-	-	3	1	1	-	-	1	3	1
- SUMMARIZED BY MAJOR FINANCIAL CATEGORIES	-	1	-	-	-	-	1	4	1	1	-	-	2	5	1
- NOT ORIENTED TO CHART OF ACCOUNTS	-	-	-	-	1	-	-	-	1	-	-	-	-	1	-
B. ACADEMIC															
- STUDENT (CREDIT HOURS, FTE, ETC.)	4	2	1	10	1	-	11	5	1	3	-	-	28	8	2
- FACULTY (STUDENT CONTACT HOURS, FTE, ETC.)	1	-	-	-	-	-	1	1	1	-	-	-	2	1	1
- COURSE (CONTENT)	-	-	-	-	-	-	1	1	-	1	1	-	2	2	-
- PROGRAM/ACTIVITY (DESCRIPTION)	-	-	-	-	-	-	-	3	-	-	-	-	-	3	-
- DEPARTMENT/COLLEGE (GOALS)	-	1	-	-	1	-	-	2	-	-	-	-	-	4	-
- INSTITUTION (ROLE, SCOPE, MISSION)	-	1	2	-	2	-	1	1	1	1	1	-	2	5	3
C. RESEARCH															
- PROJECT/ACTIVITY (DESCRIPTION)	2	-	-	4	-	-	4	-	-	2	-	-	12	-	-
- DEPARTMENT/COLLEGE (GOALS)	-	1	2	-	-	-	2	5	-	-	-	-	2	6	2
- INSTITUTION (ROLE, SCOPE, MISSION)	1	-	3	-	-	-	2	3	1	2	1	-	5	4	4
D. FACILITIES															
- EQUIPMENT (TYPE, PURPOSE, COST)	3	1	-	8	1	-	13	4	-	4	1	-	28	7	-
- BUILDING(S) (FUNCTION, SIZE, COST)	1	1	2	-	2	1	-	4	2	-	1	-	1	8	5
- DEPARTMENT/COLLEGE (GOALS)	-	1	-	2	-	-	-	3	-	-	-	-	3	4	-
- INSTITUTION (ROLE, SCOPE, MISSION)	-	1	1	-	1	-	1	2	-	1	-	-	2	4	1
E. COMMUNITY SERVICE															
- CLIENT (NEEDS)	3	-	-	9	-	-	8	3	1	4	-	-	24	3	1
- PROGRAM/ACTIVITY (DESCRIPTION)	-	1	-	1	-	-	1	1	-	-	-	-	2	2	-
- DEPARTMENT/COLLEGE (GOALS)	-	1	-	-	-	-	-	2	-	-	-	-	-	3	-
- INSTITUTIONAL (ROLE, SCOPE, MISSION)	-	-	2	-	4	-	1	2	-	-	1	-	1	7	2
N =	5			10			14			5					

TABLE A.4-.1.

QUESTION 5A PLANNING RESOURCES

PLANNING HORIZON / R	PUBLIC COMMUNITY				COMMUNITY COLLEGES				NONPUBLIC COLLEGES				PROPRIETARY SCHOOLS				TOTAL			
	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T
OUTSIDE RESOURCES																				
STATE/LOCAL ASSOCIATIONS																				
1	1	-	-	4	4	-	-	16	2	-	-	8	2	-	-	8	9	-	-	36
2	-	-	-	-	3	2	-	15	4	5	-	27	2	2	2	18	9	9	1	60
3	1	-	-	2	-	1	1	4	1	1	-	4	-	-	-	-	2	2	1	10
4	-	1	-	1	1	1	1	3	-	1	-	1	-	-	-	-	1	3	1	5
0	3	2	3	-	-	-	-	-	1	1	2	-	-	-	1	-	4	3	6	-
B	-	2	2	-	2	6	8	-	5	4	11	-	1	3	2	8	8	16	24	-
TOTAL				7				38				40				26				111
PAID CONSULTANTS																				
1	-	-	1	4	1	1	1	12	4	-	-	16	1	-	-	4	6	1	2	36
2	1	1	-	6	1	1	-	6	4	2	-	18	-	1	1	6	6	5	1	36
3	2	-	-	4	1	1	-	4	1	1	1	6	1	-	-	2	5	2	1	16
4	1	1	-	2	-	-	1	1	1	1	-	2	-	-	-	-	2	2	1	5
0	1	1	2	-	1	1	1	-	2	2	1	-	-	-	-	-	4	4	4	-
B	-	2	2	-	1	1	2	-	1	7	11	-	3	4	4	-	10	19	24	-
TOTAL				16				23				42				12				93
STATE DEPARTMENT OF EDUCATION																				
1	-	-	-	-	5	-	-	20	2	-	-	8	2	-	-	8	9	-	-	36
2	-	-	-	-	2	1	-	9	1	2	-	9	1	2	1	12	4	5	1	30
3	-	-	-	-	1	1	1	6	1	1	-	4	-	-	-	-	2	2	1	10
4	3	1	1	5	1	1	1	3	4	1	-	5	1	-	-	1	9	3	2	14
0	2	2	1	-	-	-	-	-	-	2	-	-	-	-	1	-	2	4	3	-
B	-	2	3	-	1	7	8	-	5	7	12	-	1	3	3	-	7	19	26	-
TOTAL				5				38				26				21				90
LEGISLATIVE FISCAL AGENCIES																				
1	2	-	-	8	5	-	-	20	3	-	-	12	1	-	-	4	11	-	-	44
2	1	1	-	6	3	2	1	18	-	1	-	3	1	1	-	6	5	5	1	33
3	2	-	-	4	-	1	1	4	-	1	-	2	1	1	1	6	4	3	2	16
4	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
0	-	1	3	-	-	-	-	-	-	4	2	-	-	-	1	-	5	5	6	-
B	-	2	2	-	2	7	8	-	5	7	11	-	2	3	3	-	9	19	24	-
TOTAL				19				42				17				16				94

TABLE A.5A.1.1.

QUESTION 5A CONTINUED PLANNING RESOURCES

		PUBLIC COMMUNITY				COMMUNITY COLLEGES				NONPUBLIC COLLEGES				PROPRIETARY SCHOOLS				TOTAL			
PLANNING HORIZON / R		1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T
OUTSIDE RESOURCES																					
OTHER STATE:																					
DEPT.MGT.& BUDG.		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2	1	1	-	6	3	1	1	15	-	-	-	-	-	-	-	-	4	2	1	21
	3	1	-	-	2	-	1	-	2	-	-	-	-	-	-	-	-	1	1	-	4
	4	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	1
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL					8				18												26
MESC		1	-	-	-	1	-	-	4	-	-	-	-	-	-	-	-	1	-	-	4
	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	1	-	-	2	-	-	-	-	-	-	-	-	1	-	-	2
	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL									6												6
OTHER POSTSECONDARY INSTITUTIONS		1	-	-	-	3	-	-	12	4	1	-	20	1	-	-	4	8	1	-	36
	2	1	-	-	3	1	2	1	12	2	2	-	12	1	1	-	6	5	5	1	33
	3	3	2	-	10	1	1	1	6	1	2	-	6	-	-	-	-	5	3	1	22
	4	-	1	2	3	1	-	-	1	1	-	-	1	1	-	-	1	3	3	2	6
	0	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	4	-
	B	1	2	3	-	4	7	8	-	-	-	-	-	2	4	4	-	11	21	25	-
TOTAL					16				31				39				11				97
REGIONAL/NATIONAL ASSOCIATION		1	-	-	-	2	-	-	8	3	-	-	12	1	-	-	4	6	-	-	-
	2	1	1	1	9	2	1	-	9	5	5	-	30	-	1	-	3	8	8	1	-
	3	1	-	-	2	1	1	1	6	1	2	1	8	3	-	-	6	5	3	2	-
	4	1	1	-	2	1	1	-	2	-	-	-	-	-	-	-	-	2	2	-	-
	0	1	1	2	-	-	-	1	-	-	-	1	-	-	-	1	-	1	1	5	-
	B	1	2	2	-	4	7	8	-	4	6	11	-	1	4	4	-	11	19	25	-
TOTAL					13				25				50				13				101

TABLE A.5A.1.2.

QUESTION 5A CONTINUED PLANNING RESOURCES

		PUBLIC COMMUNITY				COMMUNITY COLLEGES				NONPUBLIC COLLEGES				PROPRIETARY SCHOOLS				TOTAL			
PLANNING HORIZON / R		1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T
OUTSIDE RESOURCES																					
PROFESSIONAL ASSOCIATIONS		1	-	-	-	1	-	-	4	2	2	1	20	1	-	-	4	4	2	1	28
	2	1	1	1	9	1	1	1	9	4	2	-	18	1	1	-	6	7	5	2	42
	3	-	-	-	-	-	-	-	-	2	2	-	8	1	-	-	2	3	2	-	10
	4	2	1	-	3	2	1	-	3	-	-	-	-	-	-	-	-	4	2	-	6
	0	1	1	2	-	-	-	1	-	-	-	1	-	-	-	1	-	1	1	5	-
	B	1	3	2	-	6	8	8	-	5	7	11	-	-	-	-	-	14	21	25	-
TOTAL					12				16				46				12				86
OTHER: RELIGIOUS		1	-	-	-	-	-	-	-	1	1	1	12	-	-	-	-	1	1	1	12
	2	-	-	-	-	-	-	-	-	1	-	-	3	-	-	-	-	1	-	-	3
	3	-	-	-	-	-	-	-	-	1	1	-	4	-	-	-	-	1	1	-	4
	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL					-				-				19				-				19
LOCAL & REGIONAL PLANNING		1	-	-	-	1	-	-	4	-	-	-	-	-	-	-	-	1	-	-	4
	2	-	-	-	-	1	1	-	6	-	-	-	-	-	-	-	-	1	1	-	6
	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL					-				10				-				-				10
CENSUS DATA		1	-	-	-	1	-	-	4	-	-	-	-	-	-	-	-	1	-	-	4
	2	-	-	-	-	1	1	-	6	-	-	-	-	-	-	-	-	1	1	-	6
	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL					-				10				-				-				10

TABLE A.5A.1.3.

QUESTION 5A CONTINUED PLANNING RESOURCES

PLANNING HORIZON / R	PUBLIC COMMUNITY				COMMUNITY COLLEGES				NONPUBLIC COLLEGES				PROPRIETARY SCHOOLS				TOTAL			
	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T
<u>OUTSIDE RESOURCES</u>																				
<u>OTHER: FEDERAL</u>																				
GOVERNMENT	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	1	-	-	2	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2
	4	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
	0	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL					3				-				-				-			3

R = USAGE RATING BY RESPONDENTS:

1. GREATEST
2. SIGNIFICANT
3. MODERATE
4. MINOR
0. NOT APPLICABLE
- B. BLANK

T = TOTAL WEIGHTED VALUE (SEE CHAPTER FOUR FOR EXPLANATORY)

1-3 = SEGMENT "A" OF PLANNING HORIZON, YEARS 1-3.

4-9 = SEGMENT "B" OF PLANNING HORIZON, YEARS 4-9.

10+ = SEGMENT "C" OF PLANNING HORIZON YEAR 10 PLUS ADDITIONAL PERIOD DEFINED BY INSTITUTION.

TABLE A.5A.1.4.

QUESTION 5B PLANNING RESOURCES

PLANNING HORIZON / R	PUBLIC COMMUNITY				COMMUNITY COLLEGES				NONPUBLIC COLLEGES				PROPRIETARY SCHOOLS				TOTAL				
	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T	
INTERNAL RESOURCES																					
PLANNING STAFF:																					
CENTRAL	1	2	-	-	8	6	2	2	40	6	5	2	52	3	1	1	20	17	8	5	120
	2	-	-	1	3	-	1	-	3	3	3	-	18	-	1	-	3	3	5	1	27
	3	1	2	1	8	-	-	1	2	-	-	-	-	-	-	1	2	1	2	3	12
	4	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
	0	1	1	1	-	1	-	-	-	2	2	2	-	-	-	-	-	4	3	3	-
B	-	2	2	-	3	7	7	-	-	2	3	9	-	2	3	3	-	7	15	21	-
TOTAL					20				45				70				25				160
COLLEGE	1	2	-	-	8	2	-	-	8	4	3	2	36	1	1	1	12	9	4	3	64
	2	1	1	-	6	1	1	-	6	4	3	-	21	-	-	-	-	6	5	-	33
	3	1	1	2	8	-	-	1	2	-	-	-	-	-	-	-	-	1	1	3	10
	4	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	1	-	-	1
	0	1	1	1	-	2	1	1	-	3	3	2	-	-	-	-	-	6	5	4	-
B	2	2	-	-	4	8	8	-	-	2	4	9	-	4	4	4	-	10	18	23	-
TOTAL					22				17				57				12				108
DEPARTMENT	1	1	-	-	4	-	-	-	-	3	1	-	16	1	1	1	12	5	2	1	32
	2	1	-	-	3	3	2	1	18	7	6	1	42	-	-	-	-	11	8	2	63
	3	1	1	-	4	1	-	1	4	-	-	1	2	-	-	-	-	2	1	2	10
	4	-	-	1	1	-	-	-	-	1	2	-	3	-	-	-	-	1	2	1	4
	0	2	2	2	-	2	-	-	-	1	1	2	-	-	-	-	-	5	3	4	-
B	-	2	3	-	4	8	8	-	-	1	3	9	-	4	4	4	-	9	17	23	-
TOTAL					12				22				47				12				109
GOVERNING BOARD	1	2	1	1	16	1	3	2	24	4	2	-	24	1	-	-	4	9	6	3	72
	2	1	2	-	9	3	-	-	1	3	5	2	30	1	2	1	12	8	9	3	60
	3	2	-	1	6	3	-	-	6	2	2	-	8	-	-	-	-	7	2	1	30
	4	-	1	1	2	1	-	-	1	4	2	-	6	-	-	-	-	5	3	1	9
	0	-	-	-	-	-	-	-	-	-	-	2	-	-	-	1	-	-	-	3	-
B	-	1	2	-	-	2	7	8	-	-	2	9	-	3	3	3	-	4	13	22	-
TOTAL					33				40				68				16				157

TABLE A.5B.1.1

QUESTION 5B CONTINUE PLANNING RESOURCES

PLANNING HORIZON / R	PUBLIC COMMUNITY				COMMUNITY COLLEGES				NONPUBLIC COLLEGES				PROPRIETARY SCHOOLS				TOTAL				
	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T	
INTERNAL RESOURCES																					
DEPARTMENT HEAD	1	2	-	-	8	2	-	-	8	3	2	2	28	-	-	-	-	7	2	2	44
	2	1	-	-	3	5	2	1	24	5	3	-	24	2	1	1	12	13	6	2	63
	3	1	2	-	6	2	1	-	6	3	3	-	12	-	-	-	-	6	6	-	24
	4	1	1	2	4	-	-	-	-	2	2	-	4	1	-	-	1	3	4	2	9
	0	-	-	1	-	-	-	-	-	-	-	2	-	-	-	1	-	-	-	4	-
TOTAL	B	-	2	2	-	1	7	9	-	-	3	9	-	3	3	3	-	4	15	23	-
					21				38				68				13				140
PLANNING OFFICER	1	1	-	-	4	3	1	1	20	4	1	1	24	1	1	1	12	9	3	3	60
	2	1	1	1	9	1	-	-	3	3	2	-	15	-	-	-	-	5	3	1	27
	3	-	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	1	2
	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	3	2	2	-	2	1	1	-	5	3	2	-	-	-	-	-	10	6	5	-
TOTAL	B	-	2	2	-	4	8	8	-	1	7	6	-	4	4	4	-	9	18	23	-
					13				23				41				12				89
FACULTY	1	-	-	-	-	1	-	-	4	2	1	-	12	-	-	-	-	3	1	-	16
	2	2	-	-	6	2	1	1	12	3	4	1	24	1	-	-	3	8	5	2	45
	3	2	2	-	8	4	-	-	8	7	4	-	22	3	1	1	10	16	7	1	48
	4	1	1	2	4	2	1	1	4	1	2	1	4	-	-	-	-	4	4	4	12
	0	-	-	1	-	-	-	-	-	-	-	2	-	-	1	1	-	-	1	4	-
TOTAL	B	-	2	2	-	2	8	8	-	-	2	9	-	1	3	3	-	2	16	22	-
					18				28				62				13				121
ACADEMIC COUNCIL	1	-	-	-	-	1	-	-	4	2	1	1	16	-	-	-	-	3	1	1	20
	2	-	-	-	-	1	1	-	6	3	3	-	18	-	-	-	-	4	4	-	24
	3	3	1	-	8	1	1	-	4	5	3	-	16	1	1	1	6	10	6	1	24
	4	1	2	3	6	2	1	1	4	1	1	-	2	-	-	-	-	4	4	4	12
	0	-	-	-	-	1	-	1	-	2	2	3	-	-	-	-	-	3	2	4	-
TOTAL	B	1	2	2	-	4	7	8	-	-	3	9	-	4	4	4	-	9	16	23	-
					14				18				52				6				90

TABLE A.5B.1.2.

QUESTION 5B CONTINUE PLANNING RESOURCES

PLANNING HORIZON / R	PUBLIC COMMUNITY				COMMUNITY COLLEGES				NONPUBLIC COLLEGES				PROPRIETARY SCHOOLS				TOTAL				
	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T	
INTERNAL RESOURCES																					
PRESIDENT	1	4	3	2	36	8	4	2	56	9	8	2	76	4	1	1	24	25	16	7	192
	2	-	1	1	6	1	-	-	3	4	3	-	21	1	1	-	6	6	5	1	36
	3	1	-	-	2	-	-	-	-	-	-	1	2	-	-	1	2	1	-	2	6
	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-
	B	-	1	2	-	1	6	8	-	2	9	-	-	3	3	-	-	2	12	22	-
TOTAL					44				59				99				32				234
ACADEMIC VICE																					
PRESIDENT	1	3	1	1	20	4	2	1	28	6	5	1	48	1	-	-	4	14	8	3	100
	2	1	2	2	15	5	2	1	24	5	4	-	27	-	1	1	6	11	9	4	72
	3	1	1	-	4	-	-	-	-	1	1	-	4	1	-	-	2	3	2	-	10
	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	-	-	-	-	-	-	-	-	1	1	3	-	-	-	-	-	1	1	3	-
	B	-	1	3	-	1	6	8	-	-	2	9	-	3	4	4	-	4	13	23	-
TOTAL					39				52				79				12				182
REGISTRAR'S OFFICE																					
	1	-	-	-	-	1	-	-	4	1	1	-	8	1	-	-	4	3	1	-	16
	2	-	-	-	-	2	1	1	12	5	5	-	30	-	1	-	3	7	7	1	45
	3	1	1	-	4	4	-	-	8	6	2	2	20	-	-	1	2	11	3	3	34
	4	3	1	1	5	1	1	-	2	1	2	-	3	1	1	1	3	6	5	2	13
	0	1	1	2	-	-	-	2	-	-	-	2	-	-	-	-	-	2	1	5	-
	B	-	2	2	-	2	8	8	-	3	9	-	-	3	3	3	-	4	16	22	-
TOTAL					9				26				61				12				108
FINANCIAL VICE																					
PRESIDENT	1	2	1	1	16	3	1	-	16	5	3	-	32	2	3	-	8	12	5	1	72
	2	1	1	1	9	4	1	-	15	6	6	-	36	1	2	1	12	12	10	2	72
	3	1	1	-	4	1	1	1	6	1	1	1	6	1	-	1	4	4	3	3	20
	4	1	-	1	2	-	-	-	-	-	-	1	1	-	-	-	-	1	-	2	3
	0	-	-	-	-	1	1	1	-	1	1	2	-	-	-	-	-	2	2	3	-
	B	-	2	2	-	1	4	8	-	-	2	9	-	1	3	3	-	2	13	22	-
TOTAL					31				37				75				24				167

TABLES A.5B.1.3.

QUESTION 5B CONTINUE PLANNING RESOURCES

PLANNING HORIZON / R	PUBLIC COMMUNITY				COMMUNITY COLLEGES				NONPUBLIC COLLEGES				PROPRIETARY SCHOOLS				TOTAL				
	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T	
INTERNAL RESOURCES																					
OPERATIONS VICE																					
PRESIDENT	1	1	-	-	4	1	1	-	8	2	2	-	16	1	-	-	4	5	3	-	32
	2	1	1	1	9	3	1	1	15	2	2	-	12	2	1	1	12	8	5	3	48
	3	-	1	-	2	-	-	-	-	-	-	1	2	-	-	-	-	-	1	1	4
	4	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
	0	2	1	1	-	2	1	1	-	7	5	3	-	-	-	-	-	11	7	5	-
	B	1	2	2	-	4	7	8	-	2	4	9	-	2	4	4	-	9	17	23	-
TOTAL					16				23				30				16				85
INSTITUTIONAL																					
RESEARCH																					
	1	-	-	-	-	1	1	1	12	1	2	-	12	-	-	-	-	2	3	1	24
	2	2	1	1	12	1	-	-	3	4	4	1	27	1	1	1	9	8	6	3	51
	3	-	1	-	1	1	-	-	2	2	3	-	10	-	-	-	-	3	4	-	14
	4	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
	0	2	1	1	-	3	1	1	-	6	2	3	-	-	-	-	-	11	4	5	-
	B	1	2	2	-	4	8	8	-	-	2	9	-	4	4	4	-	9	16	23	-
TOTAL					15				17				49				9				90
STUDENT GROUPS																					
	1	-	-	-	-	-	-	-	-	1	1	-	8	-	-	-	-	1	1	-	8
	2	-	-	-	-	-	-	-	-	3	-	-	9	-	-	-	-	3	-	-	9
	3	2	-	-	4	4	1	2	14	1	3	-	8	1	1	1	6	8	5	3	32
	4	2	2	2	6	2	1	-	3	6	5	-	11	-	-	-	-	10	8	2	20
	0	1	1	1	-	1	-	-	-	2	2	4	-	-	-	-	-	4	3	5	-
	B	-	2	2	-	3	8	8	-	-	2	9	-	4	4	4	-	7	16	23	-
TOTAL					10				17				36				6				69
STUDENT(S) (INDIVIDUAL)																					
	1	-	-	-	-	-	-	-	-	1	1	-	8	-	-	-	-	1	1	-	8
	2	-	-	-	-	1	-	-	3	-	-	-	-	-	-	-	-	1	-	-	3
	3	-	-	-	-	1	1	1	6	4	1	-	10	1	1	1	6	6	3	2	22
	4	2	1	1	4	4	1	1	6	6	8	-	14	-	-	-	-	12	10	2	24
	0	3	2	2	-	1	-	-	-	2	1	4	-	-	-	-	-	6	3	6	-
	B	-	2	2	-	3	8	8	-	-	2	9	-	4	4	4	-	7	16	23	-
TOTAL					4				15				32				6				57

TABLE A.5B.1.4.

QUESTION 5B CONTINUE PLANNING RESOURCES

PLANNING HORIZON / R	PUBLIC COMMUNITY				COMMUNITY COLLEGES				NONPUBLIC COLLEGES				PROPRIETARY SCHOOLS				TOTAL			
	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T	1-3	4-9	10+	T
<u>INTERNAL RESOURCES</u>																				
<u>STUDENT(S),</u>																				
<u>ADMINISTRATION,</u>																				
<u>FACULTY</u>																				
1	-	-	-	-	-	-	-	-	1	1	-	8	-	-	-	-	1	1	-	8
2	-	-	-	-	3	2	2	21	4	3	1	24	1	1	1	9	8	6	4	54
3	3	1	1	10	1	1	-	4	1	1	-	4	-	-	-	-	5	3	1	18
4	2	2	2	6	1	-	-	1	2	3	-	5	-	-	-	-	5	5	2	12
0	-	-	-	-	2	-	-	-	4	2	3	-	-	-	-	-	6	2	3	-
B	-	2	2	-	3	7	8	-	1	3	9	-	4	4	4	-	8	16	23	-
TOTAL				16				26				41				9				92
<u>ALUMNI (INDIVIDUAL)</u>																				
1	-	-	-	-	-	-	-	-	1	-	-	4	-	-	-	-	1	-	-	4
2	-	-	-	-	-	-	-	-	1	2	1	12	1	1	1	9	2	3	2	21
3	-	-	-	-	-	-	-	-	4	3	1	16	-	-	-	-	4	3	1	16
4	2	1	1	4	4	2	2	8	5	3	-	8	-	-	-	-	11	6	3	20
0	3	2	2	-	2	-	-	-	2	2	2	-	-	-	-	-	7	4	4	-
B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	17	23	-
TOTAL				4				8				40				9				61
<u>ALUMNI (GROUPS)</u>																				
1	-	-	-	-	-	-	-	-	2	1	1	16	-	-	-	-	2	1	1	16
2	-	-	-	-	-	-	-	-	-	1	1	6	1	1	1	9	1	2	2	15
3	1	-	-	2	1	-	-	2	3	1	-	8	-	-	-	-	5	1	-	12
4	3	3	3	9	3	1	1	5	3	-	-	3	-	-	-	-	9	4	4	17
0	1	-	-	-	2	-	-	-	4	3	1	-	-	-	-	-	7	3	1	-
B	-	2	2	-	4	9	9	-	1	7	10	-	4	4	4	-	17	23	24	-
TOTAL				11				7				33				9				60

R = USAGE RATING BY RESPONDENTS:

1. GREATEST 2. SIGNIFICANT 3. MODERATE 4. MINOR 0. NOT APPLICABLE B. BLANK

T = TOTAL WEIGHTED VALUE (SEE CHAPTER FOUR FOR EXPLANATORY).

1-3 = SEGMENT "A" OF PLANNING HORIZON, YEARS 1-3.

4-9 = SEGMENT "B" OF PLANNING HORIZON, YEARS 4-9.

10+ = SEGMENT "C" OF PLANNING HORIZON YEAR 10 PLUS ADDITIONAL PERIOD DEFINED BY INSTITUTION.

TABLE A.5B.1.5.

QUESTION 6A ASSUMPTIONS

	I								II				III															
	A								B				C				A	B	C	D	E	F	H	O	P	S	X	Z
<u>PUBLIC COLLEGES</u>	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	A	B	C	D	E	F	H	O	P	S	X	Z
FINANCE	-	2	3	-	2	1	2	-	-	3	-	-	-	1	-	-	1	-	-	-	-	-	-	-	1	1	-	2
ADMINISTRATION	1	2	1	-	1	-	2	1	-	1	1	1	-	-	-	-	1	-	-	-	-	-	-	-	2	-	-	1
ACADEMIC	2	1	-	1	-	2	2	-	-	1	2	-	-	-	1	1	3	-	-	-	-	-	-	-	1	-	-	-
RESEARCH	-	2	-	1	1	1	1	-	-	1	2	-	-	-	1	1	2	-	-	-	-	-	-	-	1	-	-	-
FACILITIES	-	1	1	1	1	-	1	1	-	2	-	1	-	-	-	3	-	-	-	-	-	-	-	1	1	-	-	1
COMMUNITY SERVICE	2	-	-	-	1	-	-	1	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	1	-
TOTAL	5	8	5	3	6	4	8	3	-	9	4	2	-	1	3	6	7	-	-	-	-	-	-	1	7	1	1	4
<u>COMMUNITY COLLEGES</u>																												
FINANCE	1	4	3	1	6	3	-	-	-	1	3	1	-	-	-	1	-	-	-	-	-	-	-	-	1	1	-	7
ADMINISTRATION	1	3	1	4	5	3	1	-	-	1	4	-	-	-	-	1	-	1	-	-	-	-	-	-	7	1	-	-
ACADEMIC	4	1	1	3	7	2	-	-	1	2	2	-	-	-	-	1	6	1	-	-	-	-	-	-	1	1	-	-
RESEARCH	-	1	-	2	2	1	1	-	-	1	-	1	-	1	-	-	-	-	-	1	-	-	-	-	1	2	-	-
FACILITIES	1	4	3	1	6	1	2	-	-	2	3	-	-	-	1	-	-	-	-	1	-	-	2	1	3	-	2	
COMMUNITY SERVICE	6	1	1	1	5	3	-	1	1	-	3	1	-	-	-	1	1	-	-	2	-	-	1	-	2	3	-	-
TOTAL	13	14	9	12	31	13	4	1	2	7	15	3	-	1	1	4	7	2	-	3	1	-	1	2	13	11	-	9
<u>NONPUBLIC COLLEGES</u>																												
FINANCE	-	3	9	1	8	4	1	-	2	6	3	-	-	1	2	2	-	2	-	-	-	-	-	-	2	-	2	7
ADMINISTRATION	-	5	-	8	6	4	2	1	3	4	3	1	-	1	2	1	-	-	3	-	-	-	-	2	7	-	-	1
ACADEMIC	4	3	1	5	7	5	1	-	5	4	2	-	2	1	1	1	6	-	-	2	1	1	-	-	1	1	1	-
RESEARCH	3	3	1	1	1	3	1	2	1	3	2	2	1	-	2	-	3	-	-	-	1	1	2	1	-	-	-	-
FACILITIES	2	7	-	4	7	4	2	-	2	4	4	-	-	1	3	1	-	1	1	-	-	-	-	2	3	-	-	6
COMMUNITY SERVICE	5	3	1	2	3	5	3	-	2	5	2	1	1	-	3	1	-	1	1	1	-	2	1	-	1	2	1	1
TOTAL	14	24	12	21	32	25	10	3	15	26	16	4	4	4	13	6	9	4	5	3	2	4	3	5	14	3	4	15
<u>PROPRIETARY</u>																												
FINANCE	2	2	-	1	4	1	-	-	-	1	2	-	-	-	-	1	-	-	-	-	-	-	-	2	2	-	-	1
ADMINISTRATION	1	2	-	2	4	1	-	-	-	2	1	-	-	1	-	2	1	1	-	-	-	-	-	1	2	-	-	-
ACADEMIC	2	-	2	1	5	-	-	-	-	2	1	-	-	-	-	1	2	-	2	-	1	-	1	-	1	-	-	-
RESEARCH	-	-	2	-	1	1	-	-	1	-	1	-	1	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-
FACILITIES	2	3	-	-	2	1	-	1	1	1	-	-	-	2	-	1	-	-	-	-	-	-	1	-	2	-	-	1
COMMUNITY SERVICE	2	1	-	-	2	1	-	-	-	1	1	-	-	1	-	1	-	-	-	1	-	1	-	-	1	-	-	-
TOTAL	9	8	4	4	18	5	-	1	2	6	6	-	1	4	1	8	1	3	-	2	1	1	2	3	8	-	-	2

I ASSUMPTION II HORIZON III SOURCE
SEE PAGE 2 FOR COLUMN DEFINITIONS

TABLE A.6A.1.1.

QUESTION 6A ASSUMPTIONS

	I								II								III											
					A				B				C															
TOTAL	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	A	B	C	D	E	F	H	O	P	S	X	Z
FINANCE	3	11	15	3	20	9	3	-	2	11	8	1	-	2	2	4	1	2	-	-	-	-	-	2	6	2	2	17
ADMINISTRATION	3	12	2	14	16	8	5	2	3	8	9	2	-	2	2	5	2	2	3	-	-	-	-	3	18	1	-	2
ACADEMIC	12	5	4	10	19	9	3	-	6	9	7	-	2	1	3	5	15	3	-	3	1	1	1	-	4	2	1	-
RESEARCH	3	6	3	4	5	6	3	2	2	5	5	3	2	1	3	2	5	-	-	1	2	1	2	1	2	2	-	-
FACILITIES	5	15	4	6	16	6	5	2	3	9	7	1	-	3	4	5	-	1	1	-	1	-	1	5	7	3	-	10
COMMUNITY SERVICE	15	5	2	3	11	9	3	2	3	7	6	2	1	1	4	3	1	1	1	4	-	3	2	-	4	5	2	1
TOTAL	41	54	30	40	87	47	22	8	19	49	9	7	5	10	18	24	24	9	5	8	4	5	6	11	41	15	5	30

I PLANNING ASSUMPTIONS: COLUMN 1 SOCIETAL (INTEGRATIVE)
 2 NORMATIVE (PATTERN-MAINTENANCE)
 3 CONTEXT (ADAPTIVE)
 4 PERFORMANCE (GOAL-ATTAINMENT)

II PLANNING HORIZON: A 1-3 YEARS COLUMN 1 GREATEST EMPHASIS
 B 4-9 YEARS 2 SIGNIFICANT EMPHASIS
 C 10+ YEARS 3 MODERATE EMPHASIS
 4 MINOR EMPHASIS
 0 (NOT INCLUDED, LIMITED SPACE)

III ASSUMPTION SOURCES: A) ACADEMIC VICE PRESIDENT/PROVOST
 B) BOARD OF DIRECTORS/REGENTS/TRUSTEES
 C) COMMITTEE (ANY)
 D) DEAN
 E) EXPERT (OUTSIDE)
 F) FACULTY
 H) HEAD OF DEPARTMENT
 O) OPERATIONS VICE PRESIDENT
 P) PRESIDENT
 S) STAFF
 X) OUTSIDE ORGANIZATION
 Z) ADMINISTRATIVE/FINANCIAL VICE PRESIDENT

TABLE A.6A.1.2.

QUESTION 6B ASSUMPTIONS

	I				A				II B				C				III											
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	A	B	C	D	E	F	H	O	P	S	X	Z
PUBLIC COLLEGES																												
FINANCE	-	3	-	1	1	2	1	-	-	1	1	-	-	1	-	1	-	-	-	-	-	-	-	-	2	-	-	2
ADMINISTRATION	-	2	-	2	1	-	1	2	-	-	-	2	-	-	-	1	1	-	-	-	-	-	-	-	2	-	-	1
ACADEMIC	2	1	1	-	1	1	2	-	-	2	1	-	-	-	2	-	1	-	-	-	1	-	-	-	1	-	-	-
RESEARCH	2	-	-	1	-	2	1	-	-	2	1	-	-	-	2	-	1	-	-	-	1	-	-	-	1	-	-	-
FACILITIES	-	3	-	-	1	1	-	1	1	-	1	1	1	-	-	2	-	-	-	-	-	-	-	-	-	-	1	-
COMMUNITY SERVICE	-	-	-	1	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-
TOTAL	4	9	1	5	4	7	5	3	1	5	5	3	1	1	4	5	4	-	-	-	2	-	-	1	7	-	1	4
COMMUNITY COLLEGES																												
FINANCE	1	4	-	3	6	1	1	-	2	1	1	1	1	-	-	-	-	1	-	-	-	-	-	-	1	1	-	5
ADMINISTRATION	2	1	3	2	4	3	-	1	-	3	1	1	-	1	-	-	-	-	1	-	-	-	-	-	5	1	1	-
ACADEMIC	6	-	2	-	6	1	1	-	1	1	2	1	-	1	-	-	7	-	-	-	-	-	-	-	-	2	-	-
RESEARCH	-	1	1	-	1	2	1	-	-	1	1	-	-	1	-	-	-	-	-	1	-	-	-	-	-	2	-	-
FACILITIES	1	3	4	-	4	2	2	-	-	1	1	3	-	-	-	1	1	-	-	2	-	-	1	-	1	1	1	1
COMMUNITY SERVICE	1	1	4	2	4	1	2	-	1	-	3	1	-	-	1	-	1	-	-	2	-	-	1	-	1	1	1	1
TOTAL	11	10	14	7	25	10	7	1	4	7	9	7	1	3	1	1	8	2	1	3	1	-	1	1	7	9	2	8
NONPUBLIC COLLEGES																												
FINANCE	-	8	4	-	9	2	-	1	3	5	2	-	-	3	2	1	-	1	-	2	-	-	-	-	1	1	3	4
ADMINISTRATION	2	5	5	-	6	3	2	1	1	5	4	-	-	-	3	2	-	-	2	-	-	-	1	-	8	-	1	-
ACADEMIC	5	-	7	-	7	4	1	-	1	8	1	-	-	2	3	1	6	-	-	1	1	2	-	-	-	1	1	-
RESEARCH	4	-	3	1	1	4	1	2	1	2	2	2	1	-	1	2	1	-	-	-	1	3	1	1	-	-	1	-
FACILITIES	1	9	2	-	4	6	2	-	3	3	4	-	1	1	2	2	-	-	1	-	-	-	-	1	3	-	1	6
COMMUNITY SERVICE	-	1	6	3	2	5	2	-	1	3	3	2	-	-	5	-	1	-	2	1	-	1	-	-	1	2	1	1
TOTAL	12	23	27	4	29	24	8	4	10	26	16	4	2	6	16	8	8	1	5	4	2	6	2	2	13	4	8	11
PROPRIETARY																												
FINANCE	2	1	-	2	2	2	1	-	2	2	-	-	1	-	-	-	-	-	-	-	-	-	-	2	2	-	-	1
ADMINISTRATION	2	3	-	-	3	2	-	-	2	2	-	-	1	1	-	1	-	-	-	-	-	-	-	1	3	-	-	1
ACADEMIC	1	1	3	-	3	2	-	-	1	3	-	-	-	2	-	1	-	2	-	-	-	-	1	-	2	-	-	-
RESEARCH	-	2	-	-	-	2	-	-	1	1	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-
FACILITIES	2	2	-	1	1	2	1	1	3	1	-	-	1	2	-	-	-	-	-	-	-	-	-	2	3	-	-	-
COMMUNITY SERVICE	1	2	-	-	-	3	-	-	2	1	-	-	1	1	-	-	-	1	-	-	-	-	-	-	2	-	-	-
TOTAL	8	11	3	3	9	13	2	1	11	10	-	-	4	7	-	2	1	3	-	-	-	-	1	5	12	-	-	2

I ASSUMPTION II HORIZON III SOURCE
SEE PAGE 2 FOR COLUMN DEFINITIONS

TABLE A.6B.1.1.

QUESTION 6B ASSUMPTIONS

	I								II								III															
	A								B								C															
TOTAL	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	A	B	C	D	E	F	H	O	P	S	X	Z				
FINANCE	3	16	4	6	18	7	3	1	7	9	4	1	2	4	2	2	-	2	-	2	-	-	-	2	6	2	3	12				
ADMINISTRATION	6	11	8	4	14	8	3	4	3	10	5	3	1	2	3	4	1	-	3	-	-	-	-	1	18	1	2	2				
ACADEMIC	14	2	13	-	17	8	4	-	3	14	4	1	-	5	5	2	15	2	-	1	2	2	1	-	3	2	1	-				
RESEARCH	6	3	4	2	2	10	3	2	2	6	4	2	1	2	3	2	3	-	-	1	2	3	1	1	1	2	1	-				
FACILITIES	4	17	6	1	10	11	5	2	7	5	6	4	3	3	2	5	-	1	1	-	1	-	-	5	7	3	1	9				
COMMUNITY SERVICE	2	4	10	6	6	10	4	-	4	4	7	3	1	1	6	1	2	1	2	3	-	1	1	-	4	3	3	2				
TOTAL	35	53	45	19	67	54	22	9	26	68	30	14	8	17	21	16	21	6	6	7	5	6	3	9	39	13	11	25				

I PLANNING ASSUMPTIONS: COLUMN 1 SCIENCE AND TECHNOLOGY

2 ECONOMIC

3 DEMOGRAPHIC

4 POLITICAL

II PLANNING HORIZON: A 1-3 YEARS COLUMN 1 GREATEST EMPHASIS

B 4-9 YEARS

C 10+ YEARS

2 SIGNIFICANT EMPHASIS

3 MODERATE EMPHASIS

4 MINOR EMPHASIS

0 (NOT INCLUDED, LIMITED SPACE)

III ASSUMPTION SOURCES: A) ACADEMIC VICE PRESIDENT/PROVOST

B) BOARD OF DIRECTORS/REGENTS/TRUSTEES

C) COMMITTEE (ANY)

D) DEAN

E) EXPERT (OUTSIDE)

F) FACULTY

H) HEAD OF DEPARTMENT

O) OPERATIONS VICE PRESIDENT

P) PRESIDENT

S) STAFF

X) OUTSIDE ORGANIZATION

Z) ADMINISTRATIVE/FINANCIAL VICE PRESIDENT

TABLE A.6B.1.2.

QUESTION 6C ASSUMPTIONS

	I					A				II B				C				III											
	1	2	3	4	5	1	2	3	4	1	2	3	4	1	2	3	4	A	B	C	D	E	F	H	O	P	S	X	Z
PUBLIC COLLEGES																													
FINANCE	2	-	1	-	-	-	2	-	1	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	2	-	-	1
ADMINISTRATION	1	1	1	-	-	1	-	1	1	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	2	-	-	1
ACADEMIC	1	1	-	1	1	1	1	2	-	-	-	1	-	-	-	1	-	2	-	-	-	-	1	-	-	1	-	-	-
RESEARCH	-	1	2	-	-	-	3	-	-	-	-	1	-	-	-	-	1	2	-	-	-	-	-	-	-	1	-	-	-
FACILITIES	1	-	2	-	-	1	-	2	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-	-	-	1	-	-	1
COMMUNITY SERVICE	1	1	-	-	-	-	-	1	1	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	1	-	1	-
TOTAL	6	4	6	1	1	3	6	6	3	-	-	4	2	-	1	1	4	5	-	-	-	-	1	-	-	8	-	1	3
COMMUNITY COLLEGES																													
FINANCE	6	-	2	-	-	6	2	-	-	-	2	2	-	-	-	1	-	-	-	-	-	-	-	2	-	1	-	-	5
ADMINISTRATION	2	5	1	-	-	6	2	-	-	2	2	-	-	1	-	-	-	-	1	-	-	-	-	-	-	7	-	-	-
ACADEMIC	-	4	2	-	2	5	2	1	-	1	1	1	-	-	1	-	-	7	-	-	-	-	-	-	-	1	-	-	-
RESEARCH	1	-	1	-	1	3	-	-	-	-	2	-	-	-	1	-	-	-	-	-	1	-	-	-	-	1	1	-	-
FACILITIES	6	-	2	-	-	4	2	2	-	-	2	1	1	-	-	1	-	-	1	-	-	-	-	-	1	1	2	-	3
COMMUNITY SERVICE	-	5	1	-	2	4	3	1	-	1	-	2	1	-	-	1	-	-	-	-	2	-	-	2	-	3	1	-	-
TOTAL	15	14	9	-	5	28	11	4	-	4	9	6	3	1	2	3	-	7	2	-	3	-	-	4	1	14	4	-	8
NONPUBLIC COLLEGES																													
FINANCE	4	2	3	3	-	7	3	1	1	2	5	2	1	-	-	4	1	1	1	1	1	-	-	-	-	1	3	-	4
ADMINISTRATION	6	6	-	-	-	6	4	2	-	1	6	3	-	-	-	4	1	-	1	2	-	1	-	-	-	7	-	-	1
ACADEMIC	-	4	1	1	6	5	5	-	1	3	5	3	-	-	1	3	1	4	1	1	2	1	3	-	-	-	-	-	-
RESEARCH	-	5	-	-	3	-	4	1	3	-	2	3	2	-	-	1	1	1	-	-	1	1	3	1	-	-	-	1	-
FACILITIES	6	1	-	4	1	4	4	4	-	-	6	4	-	-	-	3	2	-	1	3	-	-	-	-	1	1	1	-	5
COMMUNITY SERVICE	1	6	1	2	1	2	6	3	-	-	4	4	1	-	-	4	1	1	-	3	-	-	2	1	-	2	1	-	1
TOTAL	11	14	5	10	11	24	26	11	5	6	28	19	4	-	1	19	7	7	4	10	4	3	8	2	1	11	5	1	11
PROPRIETARY																													
FINANCE	3	-	2	-	-	3	1	1	-	1	3	-	-	-	-	-	1	-	-	-	-	-	-	-	2	2	-	-	1
ADMINISTRATION	-	1	2	-	2	4	1	-	-	1	3	-	-	-	1	1	-	-	-	-	-	-	-	-	1	3	-	-	1
ACADEMIC	-	-	2	1	2	3	2	-	-	1	3	-	-	-	1	-	1	-	1	-	-	-	-	1	-	3	-	-	-
RESEARCH	-	-	2	-	-	-	2	-	-	1	1	-	-	-	1	-	-	1	-	-	-	-	-	-	-	1	-	-	-
FACILITIES	1	-	3	1	-	2	1	2	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	-	-	-
COMMUNITY SERVICE	-	1	1	1	-	1	2	-	-	1	2	-	-	1	-	-	-	1	-	-	-	-	-	-	-	2	-	-	-
TOTAL	4	2	12	3	4	13	9	3	-	7	14	-	-	-	6	1	2	1	2	-	-	-	-	1	5	14	-	-	2

I ASSUMPTION II HORIZON III SOURCE
SEE PAGE 2 FOR COLUMN DEFINITIONS

TABLE A.6C.1.1.

QUESTION 6C ASSUMPTIONS

	I					II					III																		
						A				B				C															
	1	2	3	4	5	1	2	3	4	1	2	3	4	1	2	3	4	A	B	C	D	E	F	H	O	P	S	X	Z
TOTAL																													
FINANCE	13	2	8	3	-	16	8	2	2	3	10	4	2	-	-	5	3	1	1	1	1	-	-	2	2	6	3	-	11
ADMINISTRATION	9	13	4	-	2	17	7	3	1	4	11	1	-	1	2	5	1	-	2	2	-	1	-	1	1	19	-	-	3
ACADEMIC	1	9	5	3	11	14	10	3	1	5	9	5	1	1	3	4	2	13	2	1	2	1	3	1	-	5	-	-	-
RESEARCH	1	6	5	-	4	3	9	1	3	1	5	4	2	-	2	1	2	4	-	-	2	1	3	1	-	3	1	1	-
FACILITIES	14	1	7	5	1	11	7	10	-	1	12	6	1	-	2	4	3	1	2	3	-	-	-	-	4	6	3	-	9
COMMUNITY SERVICE	2	12	3	3	3	7	11	5	1	2	6	6	3	-	1	5	2	1	1	3	2	-	2	3	-	8	2	1	1
TOTAL	39	43	32	14	21	68	52	24	8	17	53	26	9	1	10	24	13	20	8	10	7	3	8	8	7	47	9	2	24

I PLANNING ASSUMPTIONS: COLUMN 1 STRUCTURAL (INTERNAL)
 2 CULTURAL (INTERNAL)
 3 INPUT (EXTERNAL)
 4 THROUGHPUT (INTERNAL)
 5 OUTPUT (EXTERNAL)

II PLANNING HORIZON: A 1-3 YEARS COLUMN 1 GREATEST EMPHASIS
 B 4-9 YEARS 2 SIGNIFICANT EMPHASIS
 C 10+ YEARS 3 MODERATE EMPHASIS
 4 MINOR EMPHASIS
 0 (NOT INCLUDED, LIMITED SPACE)

III ASSUMPTION SOURCES: A) ACADEMIC VICE PRESIDENT/PROVOST
 B) BOARD OF DIRECTORS/REGENTS/TRUSTEES
 C) COMMITTEE (ANY)
 D) DEAN
 E) EXPERT (OUTSIDE)
 F) FACULTY
 H) HEAD OF DEPARTMENT
 O) OPERATIONS VICE PRESIDENT
 P) PRESIDENT
 S) STAFF
 X) OUTSIDE ORGANIZATION
 Z) ADMINISTRATIVE/FINANCIAL VICE PRESIDENT

TABLE A.6C.1.2.

QUESTION 6D ASSUMPTIONS

	I								II B				C				III											
	1	2	A				1	2	3	4	1	2	3	4	A	B	C	D	E	F	H	O	P	S	X	Z		
<u>PUBLIC COLLEGES</u>																												
FINANCE	1	2	-	-	1	2	-	1	1	1	1	-	-	1	-	-	-	-	-	-	-	-	1	-	1	1		
ADMINISTRATION	2	1	1	-	-	2	-	1	1	1	-	-	-	1	-	1	-	-	-	-	-	-	1	-	-	1		
ACADEMIC	3	1	1	-	2	1	1	-	1	1	-	-	-	1	2	-	-	-	1	-	-	-	1	-	-	-		
RESEARCH	-	2	-	1	1	1	-	1	1	1	-	-	-	1	-	-	-	-	1	-	-	-	1	-	1	-		
FACILITIES	2	1	-	-	1	2	-	1	1	1	-	1	-	1	-	-	-	-	-	-	-	-	1	-	-	2		
COMMUNITY SERVICE	1	1	-	-	1	1	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-		
TOTAL	9	8	2	1	6	9	1	4	7	5	1	1	-	5	2	1	-	-	2	-	-	-	6	-	3	4		
<u>COMMUNITY COLLEGES</u>																												
FINANCE	5	3	5	2	1	-	2	-	2	-	-	-	-	1	-	-	-	-	1	-	1	-	1	-	-	5		
ADMINISTRATION	5	3	4	4	-	-	1	2	1	-	-	1	-	-	-	-	2	-	-	-	-	-	6	-	-	-		
ACADEMIC	4	4	3	5	-	-	2	1	1	-	-	1	-	-	6	-	-	-	-	-	-	-	1	-	1	-		
RESEARCH	2	1	2	-	-	-	2	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	1	-	-	-		
FACILITIES	7	1	5	2	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	-	3		
COMMUNITY SERVICE	2	6	3	5	-	-	2	-	2	-	-	-	1	-	-	-	-	2	-	-	1	-	3	1	1	-		
TOTAL	25	18	22	18	1	1	10	4	7	-	-	3	1	1	6	-	2	3	1	-	2	1	13	4	2	8		
<u>NONPUBLIC COLLEGES</u>																												
FINANCE	9	3	7	1	2	2	3	6	1	1	-	2	3	1	-	2	-	-	1	-	-	-	1	2	-	6		
ADMINISTRATION	4	8	6	2	2	1	7	1	2	-	1	3	2	-	1	3	1	-	-	1	6	-	-	-	-	-		
ACADEMIC	6	6	5	4	2	1	2	7	2	-	1	1	2	2	7	-	2	1	-	1	-	-	-	1	-	-		
RESEARCH	2	6	2	1	3	2	1	3	1	3	-	1	-	2	2	-	1	-	2	1	1	-	-	1	-	-		
FACILITIES	10	2	3	5	2	2	-	6	4	1	-	2	1	3	-	2	3	-	-	-	-	-	1	-	-	6		
COMMUNITY SERVICE	7	4	3	5	2	1	-	3	6	1	-	1	3	2	-	-	4	2	-	1	-	-	1	2	-	1		
TOTAL	38	29	26	18	13	10	7	32	15	8	1	8	12	12	9	5	13	4	3	3	1	1	9	4	2	13		
<u>PROPRIETARY SCHOOLS</u>																												
FINANCE	3	2	3	1	1	-	1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-	1	1		
ADMINISTRATION	3	2	4	1	-	-	1	2	1	-	-	1	-	1	-	-	-	-	-	-	-	1	2	-	1	1		
ACADEMIC	1	4	3	2	-	-	1	2	1	-	-	1	-	1	-	1	-	-	-	-	1	-	2	-	1	-		
RESEARCH	1	1	-	2	-	-	1	1	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-		
FACILITIES	2	3	3	1	1	-	1	2	1	-	-	1	-	1	-	-	-	-	-	-	-	2	3	-	-	-		
COMMUNITY SERVICE	1	2	2	1	-	-	1	1	1	-	-	1	-	-	-	1	-	-	-	-	-	-	2	-	-	-		
TOTAL	11	13	15	8	2	-	6	10	5	-	-	5	-	3	1	2	-	-	-	-	1	4	11	-	3	2		

I ASSUMPTION II HORIZON III SOURCE
SEE PAGE 2 FOR COLUMN DEFINITIONS

TABLE A.6D.1.1.

QUESTION 6D ASSUMPTIONS

	I						II						III																	
	A						B						C																	
	1	2	1	2	3	4	1	2	3	4	1	2	3	4	A	B	C	D	E	F	H	O	P	S	X	Z				
TOTAL	18	10	15	4	5	4	6	9	5	2	1	2	3	3	-	2	-	-	2	-	1	1	5	2	2	13				
FINANCE	14	14	15	7	2	4	3	12	4	3	-	3	3	4	-	2	2	-	-	-	-	1	15	2	1	2				
ADMINISTRATION	14	15	12	11	4	2	6	10	5	2	1	3	2	4	15	1	2	1	1	1	1	-	4	-	3	-				
ACADEMIC	5	10	4	4	4	3	4	5	2	4	-	3	-	3	2	-	1	1	3	1	1	-	1	1	1	-				
RESEARCH	21	7	11	8	4	5	2	10	7	2	-	4	1	4	-	2	3	-	-	-	-	3	7	2	-	8				
FACILITIES	11	12	8	10	3	2	3	4	11	1	-	2	4	2	-	1	4	4	-	1	1	-	7	3	2	1				
COMMUNITY SERVICE	83	68	65	44	22	20	24	50	34	14	2	17	13	20	17	8	12	6	6	3	4	5	39	10	9	24				
TOTAL																														

I PLANNING ASSUMPTIONS: COLUMN 1 TREND (REACTIVE/INTERNAL)
2 PARADIGM (PROACTIVE/EXTERNAL)

II PLANNING HORIZON: A 1-3 YEARS COLUMN 1 GREATEST EMPHASIS
B 4-9 YEARS 2 SIGNIFICANT EMPHASIS
C 10+ YEARS 3 MODERATE EMPHASIS
4 MINOR EMPHASIS
O (NOT INCLUDED, LIMITED SPACE)

III ASSUMPTION SOURCES: A) ACADEMIC VICE PRESIDENT/PROVOST
B) BOARD OF DIRECTORS/REGENTS/TRUSTEES
C) COMMITTEE (ANY)
D) DEAN
E) EXPERT (OUTSIDE)
F) FACULTY
H) HEAD OF DEPARTMENT
O) OPERATIONS VICE PRESIDENT
P) PRESIDENT
S) STAFF
X) OUTSIDE ORGANIZATION
Z) ADMINISTRATIVE/FINANCIAL VICE PRESIDENT

TABLE A.6D.1.2.

QUESTION ASSUMPTIONS

ASSUMPTION	PUBLIC COLLEGES				COMMUNITY COLLEGES				NONPUBLIC COLLEGES				PROPRIETARY SCHOOLS				TOTAL			
TYPE	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
SOCIETAL (INTEGRATIVE)	-	-	3	-	4	3	1	-	6	5	2	-	1	2	1	-	11	10	7	-
NORMATIVE																				
(PATTERN-MAINTENANCE)	2	-	1	-	4	1	3	-	4	3	4	2	1	2	1	-	11	6	9	2
CONTEXT (ADAPTIVE)	3	-	-	-	2	3	2	1	4	3	2	3	-	1	1	2	9	7	5	6
PERFORMANCE																				
(GOAL-ATTAINMENT)	-	-	-	3	1	-	-	7	-	1	1	11	2	-	1	1	3	1	2	22
SCIENCE & TECHNOLOGY																				
(GENERAL ENVIRONMENTAL	1	-	2	-	3	2	1	2	5	5	2	-	-	3	1	-	9	10	6	2
ECONOMIC																				
(GENERAL ENVIRONMENTAL)	1	2	-	-	-	7	1	-	5	7	-	1	-	3	-	1	6	19	1	2
DEMOGRAPHIC																				
(GENERAL ENVIRONMENTAL)	2	1	-	-	2	4	1	1	5	6	2	-	2	1	1	-	11	12	4	1
POLITICAL																				
(GENERAL ENVIRONMENTAL)	1	-	2	-	3	3	2	-	4	6	3	-	1	1	1	1	9	10	8	1
STRUCTURAL																				
(SPECIFIC ENVIRONMENTAL)	-	-	1	2	2	3	1	2	3	4	4	1	-	1	2	1	5	8	8	6
CULTURE (INTERNAL)	-	-	2	1	1	2	4	1	7	1	5	-	-	2	2	-	8	5	13	2
INPUT (EXTERNAL)	2	-	1	-	4	2	1	1	4	3	2	3	1	3	-	-	11	8	4	4
THROUGHPUT (INTERNAL)	1	1	1	-	2	2	2	2	3	1	2	6	-	1	2	1	6	5	7	9
OUTPUT (EXTERNAL)	1	-	1	1	1	-	1	6	-	2	3	7	-	-	2	2	2	2	7	16
TREND (INTERNAL)	2	1	-	-	1	7	-	-	3	8	2	-	1	2	-	1	7	18	2	1
PARADIGM (EXTERNAL)	-	-	3	-	3	4	1	-	3	6	3	-	-	2	-	2	6	12	7	2
TOTAL	16	5	17	7	33	43	21	23	56	61	37	34	9	24	15	12	114	133	90	76

TABLE A.6E.1.1.

QUESTION 7 GOAL EVOLUTION

PLANNING HORIZON/ ACTIVITY	PUBLIC COLLEGES				COMMUNITY COLLEGES			
	1-3 YRS.				4-9 YRS.			
	1	2	3	4	1	2	3	4
RESEARCH/CONTRACT	1	2	-	-	1	-	4	-
RES./INDEPENDENT	-	2	1	-	-	1	2	-
PROF./MASTERS	-	3	-	-	1	2	-	-
PROF./DOCTORATE	-	2	-	-	1	1	-	-
VOC./EXPLORATORY	1	-	-	-	1	-	-	-
VOCATIONAL/SKILLS	1	-	-	-	1	-	-	-
VOC./LICENSE/CERT.	1	-	-	-	1	-	-	-
VOC./ASSOCIATE	-	-	-	-	-	-	-	-
VOC./BACHELOR'S	-	1	1	-	-	1	1	-
GEN./EXPLORATORY	1	-	-	1	-	1	-	1
GENERAL/ASSOCIATE	-	-	-	-	-	-	-	-
GENERAL/BACHELOR'S	1	2	-	-	-	3	-	-
COMPENSATORY	-	1	-	-	-	-	1	-
LEISURE SKILLS	-	-	-	2	-	-	-	2
COMM. SER./LOCAL	1	1	-	1	1	-	1	1
COMM. SER./STATE	-	1	-	2	-	-	2	1
ORG. DEV./ADMIN.	-	-	1	2	-	1	1	1
ORG. DEV./PROG.	-	-	3	-	-	2	1	-
ORG. DEV./FACULTY	-	-	3	-	-	2	1	-

TABLE A.7-.1.1

QUESTION 7 CONTINUED

GOAL EVOLUTION

PLANNING HORIZON/ ACTIVITY	NONPUBLIC COLLEGES												PROPRIETARY SCHOOLS											
	1-3 YRS.				4-9 YRS.				10+ YRS.				1-3 YRS.				4-9 YRS.				10+ YRS.			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
RESEARCH/CONTRACT	-	1	1	4	-	1	2	2	-	-	1	2	2	-	-	-	-	1	-	-	-	-	-	-
RES./INDEPENDENT	1	3	2	3	1	1	6	2	-	2	2	3	1	1	-	-	-	1	-	-	-	-	-	-
PROF./MASTERS	3	4	-	1	2	3	4	-	2	1	-	3	-	1	1	-	-	2	-	-	-	1	-	-
PROF./DOCTORATE	2	2	-	-	1	2	1	-	1	-	1	1	-	1	-	1	-	1	-	1	-	1	-	1
VOC./EXPLORATORY	1	7	2	-	-	7	1	-	-	3	-	2	3	-	-	-	2	1	-	-	2	-	-	-
VOCATIONAL/SKILLS	3	5	1	3	2	3	2	4	2	-	1	4	3	1	-	-	2	1	-	-	2	-	1	-
VOC./LICENSE/CERT.	1	2	5	2	1	2	3	3	-	2	-	3	4	-	-	-	1	1	-	-	1	-	1	-
VOC./ASSOCIATE	2	3	1	1	1	2	3	1	-	1	1	2	1	1	-	1	2	-	-	1	1	1	-	1
VOC./BACHELOR'S	5	4	-	1	2	5	1	-	1	1	1	2	1	1	1	-	1	1	-	-	1	1	-	-
GEN./EXPLORATORY	3	6	2	-	3	5	2	-	1	2	1	2	1	1	-	-	1	1	-	-	1	1	-	-
GENERAL/ASSOCIATE	2	5	-	-	2	4	2	-	2	1	1	2	-	2	-	-	-	2	-	-	-	2	-	-
GENERAL/BACHELOR'S	7	2	-	-	4	4	1	-	2	1	1	2	-	1	1	-	-	1	1	-	-	1	1	-
COMPENSATORY	-	3	4	1	-	3	3	2	-	1	2	2	-	1	1	-	-	1	1	-	-	1	1	-
LESIURE SKILLS	-	4	4	3	1	1	5	4	1	1	1	4	-	-	-	1	-	-	-	1	-	-	-	1
COMM. SER./LOCAL	1	6	3	1	1	4	5	2	1	2	2	2	-	-	-	2	-	-	2	-	-	-	-	2
COMM. SER./STATE	-	3	4	4	-	2	4	5	-	1	2	4	-	1	-	1	-	1	-	1	-	1	-	1
ORG. DEV./ADMIN.	5	4	3	-	2	6	4	-	2	2	2	1	1	3	-	-	-	3	-	-	-	2	1	-
ORG. DEV./PROG.	8	4	-	-	5	6	1	-	2	3	2	1	3	2	-	-	-	4	-	-	-	2	-	1
ORG. DEV./FACULTY	6	6	1	-	4	5	3	-	2	2	2	2	1	1	1	-	-	2	-	-	-	1	-	-

TABLE A.7-.1.2.

QUESTION 7 CONTINUED GOAL EVOLUTION
TOTAL

PLANNING HORIZON/ ACTIVITY	1-3 YRS.				4-9 YRS.				10+ YRS.			
	1	2	3	4	1	2	3	4	1	2	3	4
RESEARCH/CONTRACT	3	3	4	5	1	3	7	2	2	-	4	4
RES./INDEPENDENT	2	6	4	7	1	3	10	4	1	2	4	5
PROF./MASTERS	4	9	1	2	4	8	4	1	4	5	-	4
PROF./DOCTORATE	2	5	2	1	2	5	2	1	3	2	1	1
VOC./EXPLORATORY	9	9	4	-	6	10	4	-	5	5	1	3
VOC./SKILLS	12	8	2	3	10	6	3	4	10	1	3	4
VOC./LICENSE/CERT.	12	2	7	2	9	2	5	3	8	2	2	3
VOC./ASSOCIATE	9	5	1	3	9	3	3	3	7	2	1	4
VOC./BACHELORS	6	6	3	2	3	7	3	1	2	3	2	3
GEN./EXPLORATORY	7	10	4	2	6	10	4	2	4	7	2	4
GEN./ASSOCIATE	7	8	1	1	7	7	3	1	7	4	1	3
GEN./BACHELORS	8	5	1	2	4	8	2	4	2	5	2	3
COMPENSATORY	5	5	9	2	-	5	9	3	1	2	6	5
LEISURE SKILLS	2	7	7	6	3	3	9	7	3	3	4	7
COMM. SER./LOCAL	6	9	5	4	7	5	8	5	7	4	3	6
COMM. SER./STATE	-	7	4	9	-	4	7	9	-	3	4	9
ORG. DEV. ADMIN.	8	12	4	3	4	14	7	1	4	9	5	3
ORG. DEV. PROG.	15	10	3	-	10	15	2	-	6	9	3	3
ORG. DEV. FACULTY	10	12	5	-	8	13	3	-	5	8	3	3

TABLE A.7-.1.3.

QUESTION 8A PERSONNEL TRENDS

PUBLIC COLLEGES

DATA ELEMENT	1972	1977	1980	1981	1982	1983	1987	1992
NEW STUDENTS	30676	34083	33654	30677	24717	11570	700	700
N	4	6	6	6	5	3	1	1
X	7669	5680	5609	5113	4943	3857	700	700
S.D.	4781	4525	4287	3688	4144	4735	-	-
GRADUATING STUDENTS	18358	16802	16912	16166	11246	10000	-	-
N	4	4	4	4	2	1	-	-
X	4590	4201	4228	4042	5623	10000	-	-
S.D.	5420	4946	4927	4815	7197	-	-	-
TOTAL STUDENTS	114039	139451	140091	134725	130684	46708	7931	-
N	5	6	6	6	6	3	2	2
X	22808	23242	23349	22454	21781	15569	3966	4068
S.D.	19128	17685	174472	16496	15930	20947	2136	2415
FTE STUDENTS	97326	113225	112676	76605	74095	4949	-	-
N	5	6	6	5	5	2	-	-
X	19465	18871	18779	15321	14819	2475	-	-
S.D.	16938	15459	15316	14352	13689	431	-	-
STUDENT CREDIT HOURS	1429428	1668574	1658253	1605275	1564720	551648	49529	51385
N	5	6	6	6	6	2	1	1
X	285886	278096	276376	267546	260787	275824	49529	51385
S.D.	247539	228071	226649	216065	209007	330154	-	-
TOTAL FACULTY	3977	6184	6314	6044	5784	2623	-	-
N	4	5	5	5	5	2	-	-
X	994	1237	1263	1209	1157	1312	-	-
S.D.	1209	1107	1158	1090	1040	1681	-	-
FTE FACULTY	1248	4266	4487	4395	5916	2585	-	-
N	2	4	5	5	5	2	-	-
X	624	1067	897	897	1183	1293	-	-
S.D.	738	774	814	787	1024	1566	-	-
TENURED FACULTY	1654	3971	4749	4691	4625	1750	-	-
N	2	5	6	6	6	1	-	-
X	827	794	792	782	771	1750	-	-
S.D.	1106	760	700	676	658	-	-	-

TABLE A.8A.1.1.

QUESTION 8A PERSONNEL TRENDS

COMMUNITY COLLEGES

DATA ELEMENT	1972	1977	1980	1981	1982	1983	1987	1992
NEW STUDENTS	10065	9552	11475	12296	10458	6780	6833	5261
N	9	9	9	10	9	6	6	5
X	1118	1061	1275	12296	1162	1130	1139	1052
S.D.	722	634	893	925	934	1159	1053	1090
GRADUATING STUDENTS	2024	3139	3392	4140	3168	1839	1979	1622
N	8	9	9	10	9	6	6	5
X	253	349	377	414	352	307	330	324
S.D.	201	244	300	369	199	217	241	239
TOTAL STUDENTS	31923	40613	47335	48378	45115	17431	18400	13712
N	10	10	10	10	10	6	6	5
X	3192	4051	4734	4838	5013	2905	3067	2742
S.D.	3694	4426	5201	5811	5877	2746	2733	2832
FTE STUDENTS	18601	24698	26378	27801	27165	7837	7555	7403
N	9	10	10	10	10	5	5	5
X	2069	2470	2638	2780	2717	1567	1511	1481
S.D.	2165	2884	2770	3288	2963	1891	1695	1530
STUDENT CREDIT HOURS	250719	351350	395395	398590	397665	147875	148182	106940
N	9	10	10	10	10	6	6	5
X	27858	35135	39540	39859	30767	24646	24697	21388
S.D.	25222	38241	42076	46069	43588	19521	18061	16185
TOTAL FACULTY	379	576	3487	3121	2987	1787	316	342
N	5	6	8	8	8	5	4	4
X	76	96	436	390	373	357	79	86
S.D.	128	53	862	736	685	636	38	44
FTE FACULTY	239	312	344	344	350	352	365	225
N	4	4	4	4	4	4	4	3
X	60	78	86	86	88	88	91	75
S.T.	42	60	67	67	67	67	66	67
TENURED FACULTY	199	336	341	329	333	234	158	132
N	7	8	8	8	8	5	4	3
X	40	56	57	55	56	47	40	44
S.D.	41	37	37	36	36	33	30	35

TABLE A.8A.1.2.

QUESTION 8A PERSONNEL TRENDS

NONPUBLIC COLLEGES

DATA ELEMENT	1972	1977	1980	1981	1982	1983	1987	1992
NEW STUDENTS	4413	6071	7384	7543	7480	5250	5152	4328
N	16	17	18	17	18	15	13	11
X	292	357	410	444	416	350	396	393
S.D.	278	358	458	577	556	352	360	388
GRADUATING STUDENTS	2745	3810	4258	4742	4818	4162	4041	3560
N	14	16	17	17	17	15	13	10
X	196	254	250	279	283	298	337	356
S.D.	201	260	303	342	342	351	358	392
TOTAL STUDENTS	14652	19289	20860	23204	23445	18568	17055	14155
N	16	17	18	18	18	14	12	10
X	916	1135	1189	1289	1319	1326	1421	1415
S.D.	908	1215	1347	1480	1554	1296	1288	1390
FTE STUDENTS	12882	16453	18345	18894	19234	15029	14572	12138
N	15	17	17	17	17	14	12	10
X	859	968	1079	1111	1131	1074	1214	1214
S.D.	867	1096	1197	1214	1254	1091	1092	1183
STUDENT CREDIT HOURS	208022	257511	299495	306733	316181	238600	239590	231250
N	11	13	13	13	15	11	9	8
X	18911	19809	23038	23595	21079	21691	26621	28906
S.D.	27835	31988	33986	34654	32181	33111	38784	44588
TOTAL FACULTY	1025	1312	1559	1623	1680	1183	1097	941
N	16	17	18	18	18	14	12	11
X	64	77	87	90	93	85	91	86
S.D.	60	78	86	88	92	83	80	79
FTE FACULTY	784	915	1005	1033	1028	897	836	73
N	13	14	14	15	15	13	11	10
X	60	65	72	69	69	69	76	73
S.D.	58	65	71	69	67	67	67	67
TENURED FACULTY	245	284	300	298	306	270	286	257
N	8	8	9	9	9	8	7	6
X	31	36	33	33	34	34	41	43
S.D.	30	34	36	37	38	42	46	54

TABLE A.8A.1.3

QUESTION 8A PERSONNEL TRENDS

PROPRIETARY SCHOOLS

DATA ELEMENT	1972	1977	1980	1981	1982	1983	1987	1992
<u>NEW STUDENTS</u>	<u>290</u>	<u>703</u>	<u>1220</u>	<u>1499</u>	<u>3711</u>	<u>2692</u>	<u>3192</u>	<u>1642</u>
$\frac{N}{X}$	3	3	4	4	5	4	4	2
S.D.	97	469	305	375	742	673	798	821
	74	207	194	242	596	609	663	1102
 <u>GRADUATING STUDENTS</u>	 <u>90</u>	 <u>296</u>	 <u>514</u>	 <u>551</u>	 <u>1043</u>	 <u>1316</u>	 <u>1627</u>	 <u>767</u>
$\frac{N}{X}$	3	3	4	4	5	4	4	2
S.D.	30	99	129	136	209	329	407	384
	30	97	91	88	121	284	331	518
 <u>TOTAL STUDENTS</u>	 <u>426</u>	 <u>1301</u>	 <u>1943</u>	 <u>2395</u>	 <u>5180</u>	 <u>4157</u>	 <u>4900</u>	 <u>2259</u>
$\frac{N}{X}$	3	3	4	4	5	4	4	2
S.D.	142	434	486	599	1036	1039	1225	1130
	121	447	355	399	681	836	910	1514
 <u>FTE STUDENTS</u>	 <u>145</u>	 <u>40</u>	 <u>422</u>	 <u>595</u>	 <u>2525</u>	 <u>955</u>	 <u>1359</u>	 <u>59</u>
$\frac{N}{X}$	2	1	2	2	3	2	2	1
S.D.	73	40	211	298	841	478	680	59
	11	-	232	357	827	598	878	-
 <u>STUDENT CREDIT HOURS</u>	 <u>1280</u>	 <u>-</u>	 <u>5250</u>	 <u>7700</u>	 <u>38050</u>	 <u>12600</u>	 <u>18200</u>	 <u>-</u>
$\frac{N}{X}$	1	-	1	1	2	1	1	-
S.D.	1280	-	5250	7700	19025	12600	18200	-
	-	-	-	-	11561	-	-	-
 <u>TOTAL FACULTY</u>	 <u>16</u>	 <u>49</u>	 <u>69</u>	 <u>88</u>	 <u>189</u>	 <u>113</u>	 <u>126</u>	 <u>36</u>
$\frac{N}{X}$	3	3	4	4	5	4	4	2
S.D.	5	16	17	22	38	28	32	18
	3	20	19	21	34	22	22	24
 <u>FTE FACULTY</u>	 <u>4</u>	 <u>38</u>	 <u>49</u>	 <u>50</u>	 <u>116</u>	 <u>63</u>	 <u>63</u>	 <u>1</u>
$\frac{N}{X}$	2	2	3	3	4	3	3	1
S.D.	2	19	16	17	29	21	21	1
	-	24	18	17	25	18	20	-

TENURED FACULTY - NOT APPLICABLE

TABLE A.8A.1.4

QUESTION 8B FUNDING TRENDS

	PUBLIC COLLEGES							
DATA ELEMENT	1972	1977	1980	1981	1982	1983	1987	1992
TUITION & FEES								
N	5	6	6	6	5	4	1	1
\bar{X}	18.7%	20.9%	21.0%	23.8%	23.7%	30.4%	40.0%	50.0%
S.D.	5.2	5.7	5.6	7.0	8.1	8.3	-	-
LOCAL (MILLAGE)								
NOT APPLICABLE								
STATE								
N	5	6	6	6	5	4	1	1
\bar{X}	47.8%	50.0%	50.6%	47.8%	46.1%	52.9%	50.0%	40.0%
S.D.	15.6	17.0	16.3	16.5	17.7	13.6	-	-
FEDERAL								
N	4	6	6	6	5	3	-	-
\bar{X}	13.7%	8.5%	7.9%	8.3%	10.8%	5.4%	-	-
S.D.	8.2	7.1	6.8	7.5	7.3	9.1	-	-

TABLE A.8B.1.1.

QUESTION 8B FUNDING TRENDS

COMMUNITY COLLEGES

DATA ELEMENT	1972	1977	1980	1981	1982	1983	1987	1992
TUITION & FEES								
N	8	9	9	9	9	9	7	6
X	23.4%	27.1%	21.7%	23.7%	25.3%	26.9%	29.5%	27.8%
S.D.	2.1	4.7	4.8	5.3	7.1	7.4	6.7	4.1
LOCAL (MILLAGE)								
N	9	10	10	10	10	10	8	7
X	28.9%	21.5%	23.6%	26.5%	27.1%	29.2%	27.1%	28.7%
S.D.	4.9	9.3	9.7	10.0	10.4	10.3	11.9	11.0
STATE								
N	8	9	9	9	9	9	7	6
X	40.5%	45.8%	44.9%	40.3%	37.3%	35.3%	33.9%	34.5%
S.D.	4.4	11.17	7.4	8.8	7.9	6.9	6.2	9.7
FEDERAL								
N	5	6	6	6	6	6	4	3
X	5.8%	4.4%	3.9%	2.8%	5.1%	2.7%	2.2%	3.3%
S.D.	6.5	6.0	4.0	1.7	2.7	2.3	1.6	2.9

TABLE A.8B.1.2.

QUESTION 8B FUNDING TRENDS

NONPUBLIC COLLEGES

DATA ELEMENT	1972	1977	1980	1981	1982	1983	1987	1992
TUITION & FEES								
N	13	14	15	17	16	15	11	10
\bar{X}	61.0%	57.8%	59.0%	56.8%	61.3%	64.2%	66.6%	65.7%
S.D.	24.5	24.5	23.5	23.9	22.4	22.2	24.8	25.4
LOCAL (MILLAGE)								
NOT APPLICABLE								
STATE								
N	1	6	7	7	7	7	5	4
\bar{X}	51.1%	2.3%	1.9%	1.4%	1.4%	1.3%	1.5%	1.8%
S.D.	-	2.8	1.9	1.7	1.4	1.3	1.5	1.4
FEDERAL								
N	6	6	7	7	7	7	5	4
\bar{X}	5.4%	11.9%	10.1%	10.0%	8.7%	7.2%	5.4%	7.1%
S.D.	5.12	10.1	9.1	8.0	7.9	7.2	4.9	5.6

TABLE A.8B.1.3.

QUESTION 8B FUNDING TRENDS

PROPRIETARY SCHOOLS

DATA ELEMENT	1972	1977	1980	1981	1982	1983	1987	1992
TUITION & FEES								
N	4	4	5	5	5	5	4	3
X	95.0%	93.8%	95.0%	96.0%	96.0%	95.0%	91.2%	93.3%
S.D.	10.0	12.5	11.2	9.0	9.0	11.2	17.5	11.5
LOCAL (MILLAGE)								
NOT APPLICABLE								
STATE								
N	1	1	1	1	1	1	1	1
X	-	-	-	-	-	-	-	-
S.D.	-	-	-	-	-	-	-	-
FEDERAL								
N	1	1	1	1	1	1	1	1
X	-	-	-	-	-	-	-	-
S.D.	-	-	-	-	-	-	-	-

TABLE A.8B.1.4.

APPENDIX B
SURVEY INSTRUMENTS

1
9
8
2

Inventory
of
Planning
Attributes

MICHIGAN STATE UNIVERSITY

PERSON(S) COMPLETING THIS SURVEY

NAME: _____

TITLE: _____

TELEPHONE: () _____

QUESTIONS: _____

COMMENTS: _____

NAME: _____

TITLE: _____

TELEPHONE: () _____

QUESTIONS: _____

COMMENTS: _____

RETURN TO: J. P. VAN CLEAVE

1021 WEST MAIN STREET

GRAND LEDGE, MICHIGAN 49837

TELEPHONE (517) 627-3356

Introduction:

The purpose of the survey is to determine this institution's level of interest in planning and how it approaches the planning process. It is not intended to evaluate planning methods or the efficacy of planning assumptions.

Planning Defined: A conscious process by which an institution assesses its current state and the likely future condition of its environment, identifies possible future states for itself, and then develops organizational strategies, policies, and procedures for selecting and getting to one or more of them. # and/or Management's ability or process for sensing the environment; exercising some control over those events that offer both opportunities and constraints for the organization; establishing processes to enhance this planning-sensing ability; and identifying and choosing among available choices of action.*

Strategic Planning: As used here is the operationalization of Peterson's general planning definition by adding a time perspective (planning horizon) and context (level of detail) attributed to each segment of the planning horizon; beginning with the current budget (Plan Years 1-3); the middle planning years, or the tactical period (Plan Years 4-9); and the long-range segment (Plan Years 10 and beyond.

#Peterson, Marvin W., "Analyzing Alternative Approaches To Planning" in Improving Academic Management: A Handbook Of Planning And Institutional Research, Paul Jodanis and Marvin W. Peterson (eds.) San Francisco: Jossey-Bass, Inc., 1980, P. 114.

*Bassett, Roger, "Summary Of Forum Discussions" in Integrating Academic Planning and Budgeting in a Rapidly Changing Environment, Sidney S. Micek (ed.), Boulder, Co.: NCHEMS, 1980, P. 7.

Instructions:

Please select from the following statements one which most nearly matches this institution's interest in Strategic Planning: (check one) ()

1. This institution has implemented a Strategic Planning Process. _____
2. This institution is in the process of preparing or implementing a Strategic Plan. _____
3. This institution is evaluating the benefits of Strategic Planning. _____
4. This institution has no interest, at present, in Strategic Planning. _____
5. This institution does not require a Strategic Plan. _____

If one of the first three statements describes this institution's current level of interest in Strategic Planning, please answer all of the following eight (8) questions. If statement 2 or statement 3 was selected, please answer question 2-7 in the projective sense; that is, if a Strategic Plan and a Planning Function were in place, what would it look like and what assumptions would the Plan be structured around.

If statement 4 or 5 was selected, please complete question 1, and 8 before returning this survey instrument to:

J. P. Van Cleave
1021 West Main Street
Grand Ledge, Michigan 48837
Telephone (517) 627-3356

Question 1

Links Between Budgeting and Long-Range Planning

- o What fiscal period is covered by the current budget:

From _____ To _____
Month _____ Year _____, Month _____ Year _____

- o Are operating funds committed for the full term of the budget? Yes ___ No ___

- o Are operating funds committed for a period of time greater than the budget period? Yes ___ No ___

- o Select from the following list one "method" which is closest to the method used to prepare the current budget:

- Incremental Budgeting*, each line item is either considered for an increment or remains unadjusted in the base. Frequently, increments are calculated as uniform percentage adjustments for every line item or group of line items. _____

- Formula Budgeting* is an objective procedure for estimating the future budgetary requirements of an institution by manipulating data about future programs and by utilizing relationships between programs and cost. _____

- Planning, Programming, and Budgeting Systems* is a managerial technique designed to merge the planning process with the allocation of funds by making it impossible to allocate funds without planning. _____

- Zero-Base Budgeting* assumes nothing about prior budgets but starts from zero each year to build a new budget. _____

- Performance Budgeting* pertains to activities, not to objectives. Its principal thrust is to improve work efficiency by means of activity classification and work/cost measurement. _____

- o Select from the following statements one which is closest to describing the relationship between budgeting and long-range planning at this institution:

- Completely Integrated, same processes and planning personnel are employed to prepare a plan which covers both the current period (budget) and planning periods extending into the future. _____

- Similar, same planning personnel are used but different processes are employed and planning for one period is not directly tied (quantitatively) to other periods. Assumptions are tested for consistency on a period-to-period basis. _____

- Totally Unrelated, different personnel, different processes, planning occurs at different times and different assumptions-sets are employed. _____

- Long-Range Plan Are Prepared Periodically by select committees and are totally unrelated to the budget function. _____

- This institution prepares annual budgets but has not prepared a formal long-range plan. _____

- o Does this organization have a central planning function which is separate from the budgeting function? Yes ___ No ___

- o Is a comprehensive document prepared periodically which is referred to as The plan? Yes ___ No ___

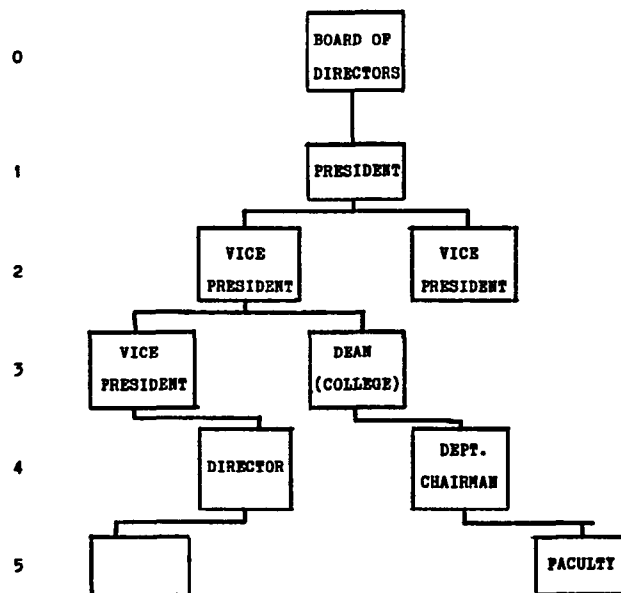
- o Is the planning emphasis such that the process is on going and dynamic so that documents which could be identified as the complete plan are rarely produced? Yes ___ No ___

*Definitions reflect the work of the following authors as reported in: Caruthers, J. Kent and Melvin Orwig, Budgeting in Higher Education. Washington, D. C.: American Association for Higher Education, P. 36-54, 1979.
.Formula Budgeting - James L. Miller, Jr.
.P.F.B.S. - Walter Kenworthy
.Zero-Base Budgeting - MACUBO
.Performance Budgeting - Allen Schick

Question 2A Central Planning Organization

- o Does a central planning organization exist in this institution? Yes ___ No ___
- How large is the staff? fewer than 3 ___
3 or more ___
- o Select, from figure 1, the organization level where the central planning function is located: ___
- o Select, from figure 1, the organization level to which the central planning function reports: ___

LEVEL



7

FIGURE 1

(NOTE: If position titles do not match those found in your organization, disregard the labels; the important criterion is level.)

Question 2B Unit Planning Organization

INSTRUCTIONS

IDENTIFY DECENTRALIZED POINTS IN THE ORGANIZATION WHERE STRATEGIC PLANNING IS RECOGNIZED AS A FORMAL ACTIVITY/TASK, AND STAFF ARE CURRENTLY ASSIGNED/ALLOCATED:

AREA

CHECK ()
IF APPLICABLE

ADMINISTRATION:

FINANCE
OPERATIONS
REGISTRAR
STUDENT SERVICES
OTHER _____

ACADEMIC:

VICE PRESIDENT/PROVOST
COLLEGE(S)
DEPARTMENT(S)
FACULTY
OTHER _____

RESEARCH:

VICE PRESIDENT
COLLEGE(S)
DEPARTMENT(S)
FACULTY
OTHER _____

Question 2C Institutional Planning

INSTRUCTIONS

- o Planning Horizon is the distance into the future covered by the plan. The horizon is divided into three segments:

"A" refers to the first three years of the plan. Typically, this includes the current (Base) year of operations; next year, the year (Budget) currently being planned, and the third (Out) year which completes the so-called operational segment.

"B" refers to out years 4 through 9, the tactical segment.

"C" refers to years 10 and beyond, the long-range segment.

INDICATE WITH A CHECK () THE SEGMENTS COVERED BY EACH TYPE OF PLAN.

It is possible that several or all three segments could be covered by more than one type of plan.

- o Type of Planning Activity

- If an integrated planning process is employed, check the appropriate responses for the line "Strategic" and continue to question 3A.
- If any functional area has a separate planning activity then respond for each activity listed.
- If each functional area has a separate plan or planning process which is periodically aggregated into a "Strategic" plan, then respond for each appropriate type of planning activity, including "Strategic".

- o Date of Plan refers to date of most current version, or date of last review if no changes were required.

- o Revision Policy refers to the institution's planned revision points for each type of plan(s). "CONT." refers to a policy of continuous revision. The numbers "1, 2, 3, 4, 5, 5+" refer to specific revision points: 1 = annually; 2 = biennial; etc. It is quite possible that some types of plans will be revised more frequently than others. "No Schedule" refers to a policy which places no up-dating requirement on the planning function.

PLEASE PLACE A () UNDER THE HEADING BEST DESCRIBING THE REVISION POLICY FOR EACH TYPE OF PLANNING ACTIVITY.

2C INSTITUTIONAL PLANNING (CHECK ALL APPROPRIATE RESPONSES)

PLANNING HORIZON			TYPE OF PLANNING ACTIVITY	DATE OF PLAN OR REVISION MONTH/YEAR	REVISION POLICY						
(A) 1-3YRS	(B) 4-9YRS	(C) 10+ YRS			CONT.	1	2	3	4	5	5+
			STRATEGIC								
			FINANCIAL								
			ACADEMIC								
			RESEARCH								
			FACILITIES								
			COMMUNITY SERVICE								

Question 3A Mechanization

INSTRUCTIONS

This question addresses the amount of mechanization employed by the institution in developing both the Strategic Plan and the Budget; the Plan is analyzed by type and the Budget is analyzed by level:

If the Plan is integrated and fully Mechanized, it is necessary to check () only the column "Data Base System" opposite the line "Strategic Plan." On the other hand, if the Plan is not integrated and is developed in its entirety using manual methods, then place a check () under the column heading "Manual" on the line opposite each type of Plan or planning process.

The Budget is approached in the same manner as the Plan, except it should be noted that here the point of interest is the Organization level. If budgetary data is developed using manual methods by department and college units then place a check () under the column heading "Manual" opposite the lines "College" and "Department." If the budget reflects detailed program or project data which is also maintained using manual methods place a check () under the column heading "Manual," opposite these lines. The Budget data may, however, be Mechanized at the institutional level; e.g., each College or Department may submit manually generated data for input to a summary level system which is Mechanized to some degree. Place a check () under the column heading which best describes the level of Mechanization available for Budget preparation and maintenance at the summary or consolidated level for the entire institution.

3A MECHANIZATION:

(CHECK ALL APPROPRIATE RESPONSES)

	MANUAL	COMPUTER BASED	INTEGRATED FILES	DATA BASE SYSTEM
STRATEGIC PLAN	_____	_____	_____	_____
FINANCIAL PLAN	_____	_____	_____	_____
ACADEMIC PLAN	_____	_____	_____	_____
RESEARCH PLAN	_____	_____	_____	_____
FACILITIES PLAN	_____	_____	_____	_____
COMMUNITY SERVICE PLAN	_____	_____	_____	_____
BUDGET:				
INSTITUTION	_____	_____	_____	_____
COLLEGE	_____	_____	_____	_____
DEPARTMENT	_____	_____	_____	_____
PROGRAM	_____	_____	_____	_____
PROJECT	_____	_____	_____	_____
COURSE	_____	_____	_____	_____

QUESTION 3B Mechanization

INSTRUCTIONS

Computer Manufactured By: abbreviation of manufacturer's name, such as IBM or CDC, is acceptable.

Model Number: system 370 Model 168, for example, will provide sufficient detail for the purposes of this survey.

Software-Proprietary: if the strategic planning system is dependent on a software package, purchased or leased from an outside source, indicate this by marking "Yes".

Vendor Name: indicate which firm supplied the software package.

Product Name: if the software package is sold or leased under a particular name or trademark, please indicate; or, if unknown so indicate.

3B IF ANY PART OF THE PLANNING SYSTEM IS MECHANIZED, PLEASE INDICATE:

COMPUTER MANUFACTURED BY _____

MODEL NUMBER _____

SOFTWARE - PROPRIETARY YES _____ NO _____

IF YES, VENDOR NAME: _____

PRODUCT(S) NAME: _____

Question 4 Level of Plan Detail

INSTRUCTIONS

PLACE A () UNDER THE COLUMN HEADING(S) WHICH REFER TO THE PLANNING PERIODS COVERED FOR EACH AREA AND LEVEL OF DETAIL.

Note 1: Select the greatest level of detail included in the planning process for each planning area. Do not select more than one level of detail for each segment ("A," "B" or "C") of the planning horizon, within each Planning Area: Financial; Academic; Research; Facilities, and Community Service.

Note 2: It is possible that one or more planning areas will not be covered in the strategic plan.

It is also possible that one or more segments of the planning horizon will not be included for certain planning areas.

Therefore, it is possible that one or more of the columns for each planning area may not require a check () mark.

Example: The financial area may be described in "line item detail, same as budget," for plan years 1 and 2 (place () under column "A"); data may be "aggregated to major budget categories" for plan years 3, 4 and 5 (place a () under column "B" on this line). If the plan does not continue for the financial area beyond plan year 5, then it is not necessary to () any further categories. If, however, for plan years 6-10 the financial area is described in global terms you should place a () under column "C" opposite "not oriented to chart of accounts."

Example: The academic plan may describe "courses" and programs by department/college as well as the entire institution for plan years 1 and 2, place () under column "A" for "course" level of detail; the plan may only infer course and program content will not change beyond plan year 3 by making no further references to specific academic areas or contemplated catalog or schedule amendments, if this is the case do not check further line items, or horizon segments for the academic category. Indicate plan content only when specific references are included in the plan.

4 LEVEL OF PLAN DETAIL

PLANNING AREA

PLANNING HORIZON
(A) (B) (C)
1-3YRS 4-9YRS 10+ YRS

A. FINANCIAL:

- LINE ITEM, SAME AS BUDGET
- AGGREGATED TO MAJOR BUDGET CATEGORIES
- DETAILED, BUT UNRELATED TO BUDGET
- SUMMARIZED BY MAJOR FINANCIAL CATEGORIES
- NOT ORIENTED TO CHART OF ACCOUNTS

B. ACADEMIC:

- STUDENT (CREDIT HOURS, FTE, ETC.)
- FACULTY (STUDENT CONTACT HOURS, FTE, ETC.)
- COURSE (CONTENT)
- PROGRAM/ACTIVITY (DESCRIPTION)
- DEPARTMENT/COLLEGE (GOALS)
- INSTITUTION (ROLE, SCOPE, MISSION)

C. RESEARCH:

- PROJECT/ACTIVITY (DESCRIPTION)
- DEPARTMENT/COLLEGE (GOALS)
- INSTITUTION (ROLE, SCOPE, MISSION)

D. FACILITIES:

- EQUIPMENT (TYPE, PURPOSE, COST)
- BUILDING(S) (FUNCTION, SIZE, COST)
- DEPARTMENT/COLLEGE (GOALS)
- INSTITUTION (ROLE, SCOPE, MISSION)

E. COMMUNITY SERVICE

- CLIENT (NEEDS)
- PROGRAM/ACTIVITY (DESCRIPTION)
- DEPARTMENT/COLLEGE (GOALS)
- INSTITUTION (ROLE, SCOPE, MISSION)

Question 5 A & B Resources Used For Planning

INSTRUCTIONS

- o Type refers to any source the institution uses for data, objective criteria, expert knowledge, refereeing or professional planning assistance.
- o Planning Horizon. RATE EACH ITEM LISTED BY RELATIVE ORDER OF EMPHASIS, FOR EACH SEGMENT OF PLANNING HORIZON, USING VALUES: 1 = GREATEST; 2 = SIGNIFICANT; 3 = MODERATE; 4 = MINOR; 0 = NOT APPLICABLE.

5A OUTSIDE RESOURCES USED FOR PLANNING:

TYPE	PLANNING HORIZON		
	(A) 1-3YRS	(B) 4-9YRS	(C) 10+ YRS
STATE/LOCAL ASSOCIATION	_____	_____	_____
PAID CONSULTANTS	_____	_____	_____
STATE DEPARTMENT OF EDUCATION	_____	_____	_____
LEGISLATIVE FISCAL AGENCIES	_____	_____	_____
OTHER STATE DEPARTMENT OR AGENCIES	_____	_____	_____
NAME _____	_____	_____	_____
OTHER POSTSECONDARY INSTITUTIONS	_____	_____	_____
REGIONAL/NATIONAL ASSOCIATIONS	_____	_____	_____
PROFESSIONAL ASSOCIATION	_____	_____	_____
OTHER _____	_____	_____	_____
_____	_____	_____	_____

5B INTERNAL RESOURCES USED FOR PLANNING:

(RATE EACH ITEM LISTED BY RELATIVE ORDER OF EMPHASIS, FOR EACH SEGMENT OF PLANNING HORIZON, USING VALUES: 1 = GREATEST; 2 = SIGNIFICANT; 3 = MODERATE; 4 = MINOR; 0 = NOT APPLICABLE)

TYPE	PLANNING HORIZON		
	(A) 1-3YRS	(B) 4-9YRS	(C) 10+ YRS
PLANNING STAFF:			
CENTRAL	_____	_____	_____
COLLEGE	_____	_____	_____
DEPARTMENT	_____	_____	_____
GOVERNING BOARD	_____	_____	_____
DEPARTMENT HEADS	_____	_____	_____
PLANNING OFFICER	_____	_____	_____
FACULTY MEMBERS	_____	_____	_____
ACADEMIC COUNCIL	_____	_____	_____
PRESIDENT	_____	_____	_____
ACADEMIC VICE PRESIDENT	_____	_____	_____
REGISTRAR'S OFFICE	_____	_____	_____
FINANCIAL VICE PRESIDENT	_____	_____	_____
OPERATIONS VICE PRESIDENT	_____	_____	_____
INSTITUTIONAL RESEARCH DEPARTMENT	_____	_____	_____
STUDENT GROUPS	_____	_____	_____
STUDENT(S) INDIVIDUAL	_____	_____	_____
STUDENT(S), ADMINISTRATIVE	_____	_____	_____
FACULTY COUNCILS	_____	_____	_____
ALUMNI, INDIVIDUALS	_____	_____	_____
ALUMNI, GROUPS	_____	_____	_____
OTHER _____	_____	_____	_____
_____	_____	_____	_____

Question 6 Planning Assumptions

Introduction

- o Assumptions represent, in concrete terms, the logic on which strategies are based, and may be stated explicitly in the strategic planning process.
- o Assumptions may also be used by planners as constraints, or, serve as referents to facilitate the sharing of a "slice of reality" by plan contributors representing a variety of disciplines and possessing diverse backgrounds.
- o Assumptions, when recorded and related to each new iteration of the "plan", provide a "map" which explains changes in terms of the introduction of new variables or new perspectives for treating what might otherwise be considered normative data.
- o Assumptions concerning near-term changes may be very specific, while assumptions relative to expected value shifts or long-term changes may be expressed in qualitative relationships.
- o The concept "planning assumptions" may be simplified, for the purposes of this study, with the following taxonomy:
 - Societal assumptions describe a measurable aspect of a social condition affected to some degree by postsecondary education.
 - Normative assumptions describe a condition or variable over which the institution has some control and which affects the institution's ability to achieve one or more of its goals.
 - Context assumptions describe a condition or variable over which the institution has little or no control; yet, affects the institution's ability to achieve one or more of its goals.
 - Performance assumptions describe a measurable or observable behavior or variable used to determine program effectiveness or efficiency.
 - Science and technology assumptions describe the state of knowledge pertaining to utilization through "tools" and "processes" of the resources found in the institution's environment which may affect its ability to achieve one or more of its goals.
 - Economic assumptions describe the state of values pertaining to utility through exchange or conversion of resources found in the institution's environment which may affect its ability to achieve one or more of its goals.
 - Demographic assumptions describe the state of population variables or behavior found in a group's environment which may affect the institution's ability to achieve one or more of its goals.
 - Political assumptions describe the state of governmental variables or behavior pertaining to incentives and sanctions which influence exchanges between individuals, groups and the institution which may affect the institution's ability to achieve one or more of its goals.
 - Structural assumptions describe the relatively stable patterns of social interaction which integrate the various elements of the institution; examples include size of organizational units, remote locations or settings away from the central campus and the presence of one or more bargaining units.
 - Cultural assumptions describe the shared sentiment, meanings and commitments which various actors (e.g., staff, faculty, students, administrators) within the institution attach to its goals, activities and problems.
 - Input assumptions describe the materials (text-books), information (knowledge and values), and equipment (language laboratories) imported by the institution from its environment and used to transform throughput into output.
 - Throughput assumptions describe the raw material (primarily the students in attendance) which the institution affects in producing output for its environment.
 - Output assumptions describe the knowledge, skills and orientations required by students at the time they leave the institution.

- Trend assumptions describe anticipated societal behavior in ways the institution believes will significantly influence its ability to achieve goals or determine goal selection.
 - Paradigm assumptions describe anticipated effects stemming from value shifts. They may be based on new perspectives gleaned from existing theories or new theories. Value shifts may impact the institution in a direct way, the public's perception of the worth of education; or indirectly through public policies such as those formulated immediately after the first Russian satellite was launched into earth's orbit. Leisure, knowledge, quality, equity, and freedom are examples of concepts institutions may monitor closely as they manage change.
- o Assumptions within each of the above categories may be based on one of several indicator variable types:
- Informative
 - Predictive
 - Problem-Oriented
 - Program-Evaluation
- The above typology represents, in broad terms, the "basis" for accepting or rejecting the assumption.
- o Assumptions must also have an author, sponsor or advocate. These "sources" have been organized into eleven categories:
- A) Academic Vice President/Provost
 - B) Board of Directors/Regents
 - C) Committee (any)
 - D) Dean
 - E) Expert (outside)
 - F) Faculty
 - H) Head of Department
 - O) Operations Vice President
 - P) President
 - S) Staff

- X) Outside Organization
 - Z) Administrative/Financial Vice President
- o Assumptions useful in strategic planning possess a temporal quality, expressed in this study as a point located in one of three time periods or segments on the Planning Horizon:
- Segment "A" refers to Plan Years 1 through 3
 - Segment "B" refers to Plan Years 4 through 9
 - Segment "C" refers to Plan Years 10 and beyond

IN SUMMARY, PLANNING ASSUMPTIONS IN THIS SURVEY WILL BE ANALYZED:

- o By Type
 - Societal
 - Normative
 - Context
 - Performance
 - Science and Technology
 - Economic
 - Demographic
 - Political
 - Structural
 - Cultural
 - Input
 - Throughput
 - Output
 - Trend
 - Paradigm
- o By Basis
 - Informative
 - Predictive
 - Problem-Oriented
 - Program-Evaluation
- o By Source - Eleven categories listed above
- o By Time
 - Segment "A" Plan Years 1 through 3
 - Segment "B" Plan Years 4 through 9
 - Segment "C" Plan Years 10 and beyond

Question 6A

Table 1

I Planning Assumptions:

1. Societal Assumptions describe a measurable aspect of a social condition affected to some degree by postsecondary education.
2. Normative assumptions describe a condition or variable over which the institution has some control and which affects the institution's ability to achieve one or more of its goals.
3. Context Assumptions describe a condition or variable over which the institution has little or no control; yet, affects the institution's ability to achieve one or more of its goals.
4. Performance assumptions describe a measurable or observable behavior or variable used to determine program effectiveness or efficiency.

II Planning Horizon:

- Segment "A" 1 through 3 years
 Segment "B" 4 through 9 years
 Segment "C" 10+ years

III Assumption Sources:

- | | |
|------------------------------------|--|
| A) Academic Vice President/Provost | H) Head of Department |
| B) Board of Directors/Regents | O) Operations Vice President |
| C) Committee (any) | P) President |
| D) Dean | S) Staff |
| E) Expert (outside) | X) Outside Organization |
| F) Faculty | Z) Administrative/Financial Vice President |

Question 6A

INSTRUCTIONS

I Refer to Table 1 and match the assumption category most often used during the planning process, for each functional area.

II Indicate the relative planning emphasis of the assumption category selected for future periods by assigning one of the following values to each segment of the planning horizon:

1 = Greatest; 2 = Significant; 3 = Moderate; 4 = Minor;
 0 = Not Applicable.

III Select the source most often suggesting assumptions for each functional area:

FUNCTIONAL AREA OF PLAN IMPACTED	I ASSUMPTION CATEGORY MOST OFTEN USED	II PLANNING HORIZON			III MOST FREQUENT SOURCE FOR ASSUMPTIONS
		A	B	C	
FINANCE	3	4	2	0	2

FUNCTIONAL AREA OF PLAN IMPACTED	I ASSUMPTION CATEGORY MOST OFTEN USED	II PLANNING HORIZON			III MOST FREQUENT SOURCE FOR ASSUMPTIONS
		A	B	C	
FINANCE	_____	_____	_____	_____	_____
ADMINISTRATION	_____	_____	_____	_____	_____
ACADEMIC	_____	_____	_____	_____	_____
RESEARCH	_____	_____	_____	_____	_____
FACILITIES	_____	_____	_____	_____	_____
COMMUNITY SERVICE	_____	_____	_____	_____	_____

Question 6B

Table 2

I Planning Assumptions:

1. Science and technology assumptions describe the state of knowledge pertaining to utilization through "tools" and "processes" of the resources found in the institution's environment which may affect its ability to achieve one or more of its goals.
2. Economic assumptions describe the state of values pertaining to utility through exchange or conversion of resources found in the institution's environment which may affect its ability to achieve one or more of its goals.
3. Demographic assumptions describe the state of population variables or behavior found in a group's environment which may affect the institution's ability to achieve one or more of its goals.
4. Political assumptions describe the state of governmental variables or behavior pertaining to incentives and sanctions which influence exchanges between individuals, groups and the institution which may affect the institution's ability to achieve one or more of its goals.

II Planning Horizon

Segment "A" 1 through 3 years

Segment "B" through 9 years

Segment "C" 10+ years

III Assumption Sources:

- | | |
|------------------------------------|--|
| A) Academic Vice President/Provost | H) Head of Department |
| B) Board of Directors/Regents | O) Operations Vice President |
| C) Committee (any) | P) President |
| D) Dean | S) Staff |
| E) Expert (outside) | X) Outside Organization |
| F) Faculty | Z) Administrative/Financial Vice President |

Question 6B

INSTRUCTIONS

I Refer to Table 2 and match the assumption category most often used during the planning process, for each functional area.

II Indicate the relative planning emphasis of the assumption category selected for future periods by assigning one of the following values to each segment of the planning horizon:

1 = Greatest; 2 = Significant; 3 = Moderate; 4 = Minor;

0 = Not Applicable.

III Select the source most often suggesting assumptions for each functional area:

FUNCTIONAL AREA OF PLAN IMPACTED	I ASSUMPTION CATEGORY MOST OFTEN USED	II PLANNING HORIZON			III MOST FREQUENT SOURCE FOR ASSUMPTIONS
		A	B	C	
FINANCE	3	4	2	0	Z

FUNCTIONAL AREA OF PLAN IMPACTED	I ASSUMPTION CATEGORY MOST OFTEN USED	II PLANNING HORIZON			III MOST FREQUENT SOURCE FOR ASSUMPTIONS
		A	B	C	
FINANCE	_____	_____	_____	_____	_____
ADMINISTRATION	_____	_____	_____	_____	_____
ACADEMIC	_____	_____	_____	_____	_____
RESEARCH	_____	_____	_____	_____	_____
FACILITIES	_____	_____	_____	_____	_____
COMMUNITY SERVICE	_____	_____	_____	_____	_____

Question 6C

Table 3

I Planning Assumptions:

1. Structural assumptions describe the relatively stable patterns of social interaction which integrate the various elements of the institution, examples include size of organizational units, remote locations or settings away from the central campus and the presence of one or more bargaining units.
2. Cultural assumptions describe the shared sentiment, meanings and commitments which various actors (e.g., staff, faculty, students, administrators) within the institution attach to its goals, activities and problems.
3. Input assumptions describe the materials (textbooks), information (knowledge and values), and equipment (language laboratories) imported by the institution from its environment and used to transform throughput into output.
4. Throughput assumptions describe the raw material (primarily the students in attendance) which the institution affects in producing output for its environment.
5. Output assumptions describe the knowledge, skills and orientations required by students at the time they leave the institution.

II Planning Horizon:

Segment "A" 1 through 3 years

Segment "B" 4 through 9 years

Segment "C" 10+ years

III Assumptions Sources:

- | | |
|------------------------------------|--|
| A) Academic Vice President/Provost | H) Head of Department |
| B) Board of Directors/Regents | O) Operations Vice President |
| C) Committee (any) | P) President |
| D) Dean | S) Staff |
| E) Expert (outside) | X) Outside Organization |
| F) Faculty | Z) Administrative/Financial Vice President |

Question 6C

INSTRUCTIONS

I Refer to Table 3 and match the assumption category most often used during the planning process, for each functional area.

II Indicate the relative planning emphasis of the assumption category selected for future periods by assigning one of the following values to each segment of the planning horizon:
1 = Greatest; 2 = Significant; 3 = Moderate; 4 = Minor;
0 = Not Applicable.

III Select the source most often suggesting assumptions for each functional area:

Example: FUNCTIONAL AREA OF PLAN IMPACTED	I ASSUMPTION CATEGORY MOST OFTEN USED	II PLANNING HORIZON			III MOST FREQUENT SOURCE FOR ASSUMPTIONS
		A	B	C	
FINANCE	3	4	2	0	Z

FUNCTIONAL AREA OF PLAN IMPACTED	I ASSUMPTION CATEGORY MOST OFTEN USED	II PLANNING HORIZON			III MOST FREQUENT SOURCE FOR ASSUMPTIONS
		A	B	C	
FINANCE	_____	_____	_____	_____	_____
ADMINISTRATION	_____	_____	_____	_____	_____
ACADEMIC	_____	_____	_____	_____	_____
RESEARCH	_____	_____	_____	_____	_____
FACILITIES	_____	_____	_____	_____	_____
COMMUNITY SERVICE	_____	_____	_____	_____	_____

Question 6D

Table 4

I Planning Assumptions:

1. Trend assumptions describe anticipated societal behavior in ways the institution believes will significantly influence its ability to achieve goals or determine goal selection.
2. Paradigm assumptions describe anticipated effects stemming from value shifts. They may be based on new perspectives gleaned from existing theories or new theories. Value shifts may impact the institution in a direct way, the public's perception of the worth of education; or indirectly through public policies such as those formulated immediately after the first Russian satellite was launched into earth's orbit. Leisure, knowledge, quality, equity, and freedom are examples of concepts institutions may monitor closely as they manage change.

II Planning Horizon

Segment "A" 1 through 3 years

Segment "B" 4 through 9 years

Segment "C" 10+ years

III Assumption Sources:

- | | |
|------------------------------------|---|
| A) Academic Vice President/Provost | H) Head of Department |
| B) Board of Directors/Regents | O) Operations Vice President |
| C) Committee (any) | P) President |
| D) Dean | S) Staff |
| E) Expert (outside) | X) Outside Organisation |
| F) Faculty | Z) Administration/
Financial
Vice President |

Question 6D

INSTRUCTIONS

I Refer to Table 4 and match the assumption category most often used during the planning process, for each functional area.

II Indicate the relative planning emphasis of the assumption category selected for future periods by assigning one of the following values to each segment of the planning horizon:
1 = Greatest; 2 = Significant; 3 = Moderate; 4 = Minor;
0 = Not Applicable.

III Select the source most often suggesting assumptions for each functional area:

FUNCTIONAL AREA OF PLAN IMPACTED	I ASSUMPTION CATEGORY MOST OFTEN USED	II PLANNING HORIZON			III MOST FREQUENT SOURCE FOR ASSUMPTIONS
		A	B	C	
FINANCE	2	4	2	0	Z

FUNCTIONAL AREA OF PLAN IMPACTED	I ASSUMPTION CATEGORY MOST OFTEN USED	II PLANNING HORIZON			III MOST FREQUENT SOURCE FOR ASSUMPTIONS
		A	B	C	
FINANCE	_____	_____	_____	_____	_____
ADMINISTRATION	_____	_____	_____	_____	_____
ACADEMIC	_____	_____	_____	_____	_____
RESEARCH	_____	_____	_____	_____	_____
FACILITIES	_____	_____	_____	_____	_____
COMMUNITY SERVICE	_____	_____	_____	_____	_____

Question 6E

Assumptions are the "building blocks" for planning, and they represent the operationalizing of both quantitative and qualitative information available to planners. Selection of specific data or observations from the plethora of data and observations available is the first step in this process. One basis for the selection of indicators to develop an assumption statement is the use of a social indicator.

Four categories of indicators:*

- A. Informative indicators are intended to describe the state of society and changes taking place within it. They are not intended to explain change or to suggest remedies when society or specific components are considered to be moving in the wrong direction. To be categorized as informative indicators, social statistics must be subject to regular production as time series and the possibility of disaggregation by what are considered through research to be the most relevant variables.

Example: Projections of Education Statistics
published by the National Center for
Education Statistics.

- B. Predictive indicators are those operationalized system components and goals that fit into explicit models (in this sense, theoretical reconstructions) of the social system or its components. In other words, they are informative indicators, with the additional criterion of belonging to a formal model. In general, they are intended to aid the prediction of future social trends and problems and more specifically to warn of secondary consequences of specific social policies or behavior.

Example: The Composite Index of leading indicators
published by the National Bureau of
Economic Research.

- C. Problem-Oriented indicators are operationalized social problem areas. They are intended to be directly helpful in providing the basis for policy solutions and should ideally point towards required action or the need for further investigation. Once a problem area is isolated e.g., declining fertility rates, it is then defined in terms of problem-oriented indicators. A valid definition should include all relevant institutional goals affected by declining fertility; supporting statistics are likely to be "one-off", as opposed to regularly produced. Problem-oriented indicators are intended to go some way towards understanding the process of change and towards suggesting possible remedial programs through "comprehensive" problem analysis.

- D. Program-Evaluation indicators provide base-line information concerning national or statewide programs. Once a program has been developed and implemented by an agency or bureau it is important to have some measure of how effectively it is meeting its aims (policy goals) and how efficiently it is using the aggregate resources committed to it. The institution should compare its performance with the aggregate as reported to/by the supervising agency. Program-evaluation indicators may be useful for comparing the institution's goals and mission with State and National policy.

Question 6E

INSTRUCTIONS

Using the definitions on the previous page, match the indicator category most often used when developing planning assumptions.

Indicator Category:

- A Informative Indicators
B Predictive Indicators
C Problem-Oriented Indicators
D Program-Evaluation Indicators

ASSUMPTION TYPE	INDICATOR CATEGORY
SOCIETAL	_____
NORMATIVE	_____
CONTEXT	_____
PERFORMANCE	_____
SCIENCE AND TECHNOLOGY	_____
ECONOMIC	_____
DEMOGRAPHIC	_____
POLITICAL	_____
STRUCTURAL	_____
CULTURAL	_____
INPUT	_____
THROUGHPUT	_____
OUTPUT	_____
TREND	_____
PARADIGM	_____

*Carriale, Elaine, "The Conceptual Structure of Social Indicators" in Social Indicators & Social Policy, Andrew Shonfield and Stella Shaw (eds.), London, England: Heinemann Educational Books, 1972, P. 23-32.

Question 7 Goal Evolution

INSTRUCTIONS

Place a value "0 to 4" under each column heading for the activity listed or added. Rate each item listed by relative order of emphasis, for each segment of the planning horizon, using values: 1 = Greatest; 2 = Significant; 3 = Moderate; 4 = Minor; 0 = Not Applicable.

Example:

It is possible that some community colleges may believe they should be prepared to perform Contract Research within 5 years (PLACE THE VALUE "3" UNDER COLUMN "B" OPPOSITE LINE "a"), but have no plans to engage in research at an earlier date (PLACE THE VALUE "0" UNDER COLUMN "A") and believe this effort will produce substantial income by the 10th year (PLACE THE VALUE "1" OR "2" UNDER COLUMN "C").

7 GOAL EVOLUTION: (RATE EACH ITEM LISTED BY RELATIVE ORDER OF EMPHASIS, FOR EACH SEGMENT OF PLANNING HORIZON, USING VALUES: 1 = GREATEST; 2 = SIGNIFICANT; 3 = MODERATE; 4 = MINOR; 0 = NOT APPLICABLE)

ACTIVITY

PLANNING HORIZON
(A) (B) (C)
1-3YRS 4-9YRS 10+ YRS

a. RESEARCH - CONTRACT			
b. RESEARCH - INDEPENDENT			
c. PROFESSIONAL PREPARATION - MASTERS LEVEL			
d. PROFESSIONAL PREPARATION - DOCTORATE LEVEL			
e. VOCATIONAL PREPARATION - EXPLORATORY			
f. VOCATIONAL PREPARATION - SKILL LEVEL			
g. VOCATION PREPARATION - LICENSE/CERTIFICATION			
h. VOCATIONAL PREPARATION - ASSOCIATE DEGREE			
i. VOCATIONAL PREPARATION - BACHELOR'S DEGREE			
j. GENERAL EDUCATION - EXPLORATORY			
k. GENERAL EDUCATION - ASSOCIATE DEGREE			
l. GENERAL EDUCATION - BACHELOR'S DEGREE			
m. COMPENSATORY EDUCATION			
n. LEISURE SKILLS			
o. COMMUNITY SERVICE - LOCAL			
p. COMMUNITY SERVICE - STATE			
q. ORGANIZATIONAL DEVELOPMENT - ADMINISTRATIVE			
r. ORGANIZATIONAL DEVELOPMENT - PROGRAMMATIC			
s. ORGANIZATIONAL DEVELOPMENT - FACULTY			
t. OTHER			
u.			

Question 8A Personnel Trend Data:

INSTRUCTIONS

- o New Students: this category is limited to those students enrolling at this institution for the first time, regardless of level.
- o Graduating Students: this category is limited to those students who have met this institution's program requirements: certificate; degree; or other formal awards, indicating academic achievement during the calendar year noted, regardless of level.
- o Total Students: include both full-time and part-time enrolled students.
- o Full-Time Equivalent (FTE) Students: include all students considered full-time, (even if they meet only the minimum requirement, e.g. 75% of a normal full-time credit-hour load) then add the full-time-equivalent enrollment (PTE) of part-time students. This may be calculated by dividing the total credit hours for part-time students by the normal full-time credit-hour load.
- o Student Credit Hours: total credit hours generated by all enrolled students.
- o Total Faculty: include both full-time and part-time employed faculty.
- o Full-Time Equivalent (FTE) Faculty: use the method currently employed by your institution for calculating FTE faculty.
- o Tenured Faculty: this category is limited to employed faculty who have been granted tenure, regardless of status: full-time; part-time; on sabbatical; on sick/disability leave; etc.
- o Columns: 1972 through 1992: please round fractional values up to next whole value for lines requiring FTE data.
- o P'cast: please use the most recent projections even if these values are different from those used in the Master Plan.

Question 8B Funding Trend Data:

INSTRUCTIONS

- o Please indicate the percentage distribution of funds, by source, received or projected, for each fiscal year.

8A PERSONNEL TREND DATA

	FALL TERM					P'CAST.	P'CAST.	P'CAST.
	1972	1977	1980	1981	1982	1983	1987	1992
NEW STUDENTS:	—	—	—	—	—	—	—	—
GRADUATING STUDENTS	—	—	—	—	—	—	—	—
TOTAL STUDENTS:	—	—	—	—	—	—	—	—
PTE STUDENTS:	—	—	—	—	—	—	—	—
STUDENTS CREDIT HOURS	—	—	—	—	—	—	—	—
TOTAL FACULTY:	—	—	—	—	—	—	—	—
PTE FACULTY:	—	—	—	—	—	—	—	—
TENURED FACULTY:	—	—	—	—	—	—	—	—

8B FUNDING TREND DATA

SOURCE	1972	1977	1980	1981	1982	P'CAST.	P'CAST.	P'CAST.
						1983	1987	1992
STUDENTS (TUITION & FEES):	—	—	—	—	—	—	—	—
FUND INCOME (INTEREST, DIVIDENDS):	—	—	—	—	—	—	—	—
RESEARCH:	—	—	—	—	—	—	—	—
CONTRIBUTIONS:	—	—	—	—	—	—	—	—
ENDOWMENTS:	—	—	—	—	—	—	—	—
DIRECT TAX (MILLAGE):	—	—	—	—	—	—	—	—
LOCAL GOVERNMENT:	—	—	—	—	—	—	—	—
STATE FUNDING:	—	—	—	—	—	—	—	—
FEDERAL FUNDING:	—	—	—	—	—	—	—	—
OTHER SOURCES:	—	—	—	—	—	—	—	—
	100%	100%	100%	100%	100%	100%	100%	100%

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