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ABSTRACT
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and limited resources. The pressures of continued bugetary
constraints will be felt in every phase and at every level of the
academic community, and the responses to these pressures will, in
large measure, determine the complexion of private higher education
into tne next century. The ability of management to be meaningfully
responsive in such an environment will be greatly influenced by: (1)
the level of involvement--top management actively participating in
establishing priorities: (2) the systems available--rapidly changing
technology causing resultant changes in policy/procedural and people
systems: (3) successful communication--information dissemination
depending upon formal and informal channels and consistency in
decision-making. This exploration of the interdependencies of these
elements in a mid-sized private institution utilizes the perspective
that decision-making is the vital art in meeting the needs of
educational management as it confronts the issues of the 80's.
(Author/JEG)

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PLANNING IN THE 80'S - INVOLVEMENT,

SYSTEMS AND COMMUNICATION- THE ART

OF DECISION-MAKING

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PLANNING IN THE 80'S - INVOLVEMENT, SYSTEMS
AND COMMUNICATION - THE ART OF DECISION-MAKING

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and people systems; (3) successful communication--information
dissemination depending upon formal and informal channels and
consistency in decision-making.

This paper will explore the interdependencies of these
elements (from the viewpoint of a mid-sized private institution)
utilizing the perspective that decision-making is the vital art
in meeting the needs of educational management as it confronts
the issues of the 80's.

Introduction

Pepperdine University is a mid-sized (about 6,000 students) independent institution operating from two campuses in Southern California through five schools and colleges. During the late 60's and early 70's the University experienced a rapid growth period, almost quadrupling in size. The mid to late 70's brought a reversal in the enrollment trend. This was partially due to administrative decisions to reduce the size of the institution and partially due to unforeseen factors. This same time period also saw a concerted effort to design and develop a management information system to meet the perceived needs of the organization.[1]

The initial five-year MIS project is nearing completion, almost one year behind schedule in some aspects and over two years ahead of schedule in others. The institution as part of the world of higher education is about to enter into the decade of the 80's, perhaps the most challenging decade yet to be experienced. It is in this context that a new five-year plan for information systems is being developed.

This paper will set forth the assumptions concerning the essential elements of the planning process used in updating the University's I.S. plan.

A Scenario of the 80's

Any realistic planning effort must take into consideration the environmental impacts which may affect the implementation of the plan.[2] The following points are widely discussed in the literature

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and certainly will impact private higher education in the next decade.

—In the past, private institutions dominated higher education in the United States; today they account for only 22 percent of enrollment and the proportion is steadily declining.[3]

—In the next ten years, unless there are changes in funding, there will be a drop of 45 percent in the student population of private institutions of higher education.[4]

—By 1995, the country's traditional college-age population will be only three-fourths of what it is today.[5]

—If inflation is not sharply curbed, prices may increase by as much as 100 percent during the next decade.[6]

—Inflation hits educational institutions harder than most other enterprises because it is harder for them to pass on cost increases to their customers.[7]

—Much of the so-called fat in college operations has been eliminated in the 70's due to improved management practices.[8]

—By the late 1980's the cost of tuition will have increased by a factor of almost four even if the inflation rate averages no more than 6 percent per year.[9]

—Colleges cannot reduce their expenses in proportion to declines in enrollment so they will need added funds while educating fewer students.[10]

—The median age in the United States which was 27.9 in 1970 will approach 40 within the next two decades.[11]

-The number of persons with college degrees is increasing faster than the professional-administrative positions to which half of them aspire.[12]

-Negative attitudes toward college and attending college may develop due to the findings of researchers about the declining dollar value of a college education.[13]

-Major corporations may develop their own "university" in which they sponsor their own education, not only in technical fields, but in writing, mathematics, etc.[14]

-Industries may award "degrees" because it is more economical and more effective to develop their own programs than to rely on educational institutions.[15]

-Technological devices including video tape cassettes, video disks, and microcomputers hooked into a central system through telephone lines may lead to college graduates who have never spent one day on a campus.[16]

These observations about enrollment, inflation, costs, efficiency, public attitude, demographics, and industrial trends are sobering for those of us in private education to say the least. The ability to survive such environmental impacts, however, lies first with the institution themselves--primarily in their capacity for developing self-discipline, clarity of mission which accents distinctive images of value and quality, and more effective means of marketing their virtues. Secondarily, it is providing at the state level better informed and more equitable policies toward

private institutions.[17]

Information systems which are designed to meet "real" institutional needs not theoretical needs and which consider "soft" data as well as "hard" data as meaningful information can be most useful in providing the basis for strategies which address the points needed for survival as noted above.[18]

Good information systems alone, however, do not provide an end all solution. Robert Murray of the Diebold Group recently published the following thoughts concerning the opportunities for management decision-making during the 80's for businesses. The authors take the liberty to insert words which pertain to education rather than business and submit these ideas as a summary of what private educational institutions can expect from the 80's.

1) The prospect for the 80's is for a continuing and increasing rate of change.

2) No quantum jumps in technology are expected, but there is a real need to make the most of what is available.

3) There is a need for better information in all quarters of the institution and the educational marketplace for quick decision-making.

4) The men and boys will be sorted out by the speed of meaningful reactions to an increasingly demanding constituency.

5) There is a need for management, not MIS, to appraise its requirements and to form an information strategy and policy, without which administration and MIS departments cannot adequately work.

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6) There is a need to manage information as a resource.

7) The "winners" in the 80's will be those who can react quickly to good, accurate, timely information.[19]

Effective Management Information Systems begin and end with good management. An absolute necessity of good management is involved managers.

Management Involvement

A recent publication reported an analysis of successful and unsuccessful MIS efforts during the 70's in some thirty colleges and universities. In the unsuccessful institutions some 53 percent indicated that the top administration was "supportive" and 24 percent thought the top administration was "involved." As a contrast, in the successful implementations nearly 90 percent felt the administration was "supportive" and 73 percent thought the top administration was "involved."[20] We, therefore, believe it is fair to say that top administrative support is a life-or-death matter.

Management may be viewed as the dynamic force which converts human and nonhuman resources into organizations. It is a process which integrates previously unrelated resources into an organism that is greater than the mere sum of its parts. The purpose of management is to coordinate the activities of people in organizations, while its overall role is to facilitate the effective and efficient attainment of organizational goals and personal needs of its members.[21] This is accomplished to a large degree

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through the process of planning.

The importance of planning given the scenario of private higher education in the 80's previously set forth, is highlighted by the following quote:
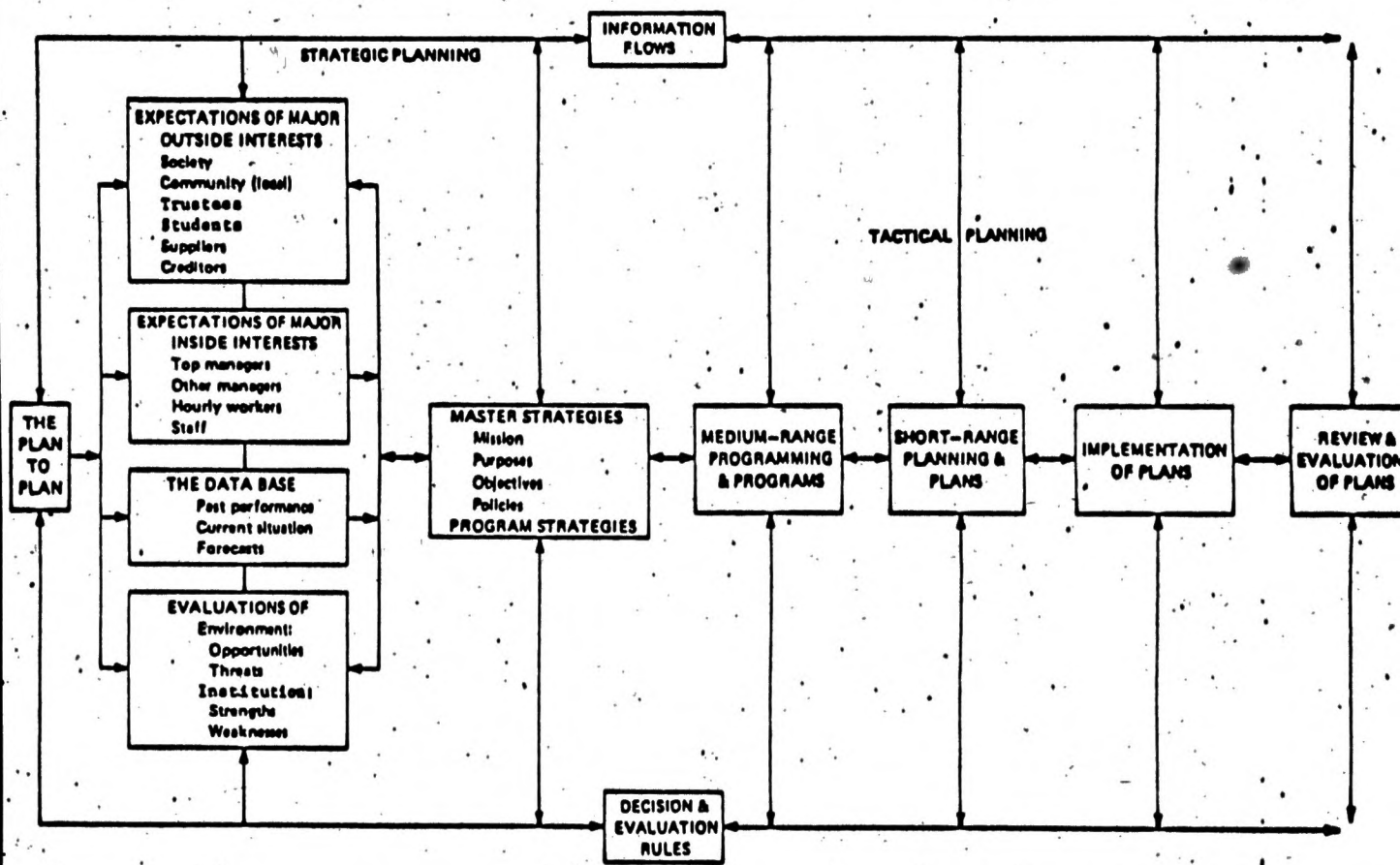
> Planning is a necessary function in all organizations; however, the need increases as turbulence in the environment intensifies. When uncertainty exists, organizations must plan for environmental contingencies to adapt successfully to change. With the current educational environment in such turmoil, strategic planning has become an important tool in higher education; however, this increasing importance has brought additional problems. The abrupt change from a relatively stable environment to one so volatile has left colleges and universities without proper knowledge and mechanisms necessary for good strategic planning.[22]

At Pepperdine, in attempting to address both the involvement issue and the need to gain necessary strategic planning knowledge, the President has reconstituted the Systems Committee[23] which served as the "policy board" for Computer Services into a smaller Systems and Planning Committee. This group is made up of the five operational Vice Presidents and the Executive Assistant to the President and is responsible for putting together and implementing a plan for planning as well as systems related policy decisions.

The Committee routinely meets every other week for two hours and intends to spend time in off-campus retreats concentrating on planning at least trimesterly. The overall planning design is shown in Figure 1 and is modeled on the concepts of Steiner and Miner.[24]

Figure 1. Structure and Process of Institution-wide Planning

STRATEGIC PLANNING

INFORMATION FLOWS

TACTICAL PLANNING

EXPECTATIONS OF MAJOR OUTSIDE INTERESTS
Society
Community (local)
Trustees
Students
Suppliers
Creditors

EXPECTATIONS OF MAJOR INSIDE INTERESTS
Top managers
Other managers
Hourly workers
Staff

THE DATA BASE
Past performance
Current situation
Forecasts

EVALUATIONS OF
Environment:
Opportunities
Threats
Institutional
Strengths
Weaknesses

THE PLAN TO PLAN

MASTER STRATEGIES
Mission
Purposes
Objectives
Policies
PROGRAM STRATEGIES

MEDIUM-RANGE PROGRAMMING & PROGRAMS

SHORT-RANGE PLANNING & PLANS

IMPLEMENTATION OF PLANS

REVIEW & EVALUATION OF PLANS

DECISION & EVALUATION RULES

Source: George A. Steiner and John B. Miner, <u>Management Policy and Strategy</u>, MacMillan, New York, 1977, p. 18.

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The concepts of "systemics" and "satisficing" perhaps best illustrate the hopes and desires of the President and the Systems and Planning Committee.

Systemics means relating to the body as a whole; thus, systemics seeks to address functions or administrative units in their entirety and not limit its analysis and design only to computer support systems. This means that the administration will be involved in the operations, objectives, and philosophies of our overall system.[25]

Satisficing is the idea that unlike the classical decision-making illustrations, you do not have the alternatives. You must go out and get them and you may have very shaky ways of evaluating them when you do find them. Thus, you look for alternatives until you get one which from experience and from what you have reason to expect, will give you a reasonable result.[26]

Satisficing does not mean managers have to be satisified with what alternative pops up first in their minds or in their computers. By personal determination, setting higher individual and/or organizational standards, and by use of an increasing range of sophisticated management science and computer-based decision-making and problem-solving techniques the level of satisficing can be raised.[27]

Administrative involvement only begins at the top. The middle managers "make it happen." The process of middle

Figure 2. Diagram of Pepperdine University
Administrative Involvement in MIS

Senior Administration

Systems & Planning Committee

Purpose: Systems policy and
university-wide
planning.
Make up: Exec. Asst. to Pres.;
Operational V.P.'s.
Meets: Weekly

Mid
Managers

Data Administrator Committee

Purpose: Set production
priorities; monitor
development efforts;
provide analysis for
S&P.
Make up: V.P. S&P; Dir. C.C.;
Registrar; Controller;
S&P Ombudsperson;
Information Systems
Administrator.
Meets: Weekly.

**Administrative Records
Advisory Committee**

Purpose: Provide input for
systems design;
implementation; revision;
communication.
Make up: V.P. S&P and about 40
mid-level managers,
directors, assoc. deans,
etc.
Meets: Monthly

Administrative Records Task Group

Purpose: Implement policy &
procedures; provide
training; communication
link.
Make up: V.P. S&P and about 15
supervisors from the
Computer Center and the
major user offices.
Meets: Weekly

**Information Communication
Group Malibu**

Purpose: Communication; address
procedural problems;
address interface needs.
Make up: Central Admin. Reps.;
Malibu Campus Admin.
Reps.; (About 25
individuals).
Meets: Weekly.

Lower
Admin.

**Information Communication
Group Los Angeles**

Purpose: Communication; address
procedural problems;
address interface needs.
Make up: Central Admin. Reps.;
L.A. Campus Admin. Reps.;
(About 25 individuals).
Meets: Weekly.
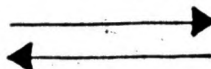
management involvement at Pepperdine has changed little from previously published descriptions.[28] The fact that there has been no major change in this area is not indicative of a lack of ongoing examination but rather of what we believe to be a process that is working rather well. Figure 2 provides a diagram of the interrelationships between management levels at Pepperdine.

Middle manager commitment is particularly important in exercising good managerial control, e.g. insuring that actual events conform to plans. Managerial control is the comparison of standards against actual performance and it should be noted that it is an essential element in evaluating the planning process. Good managerial control is of particular significance in an era such as that outlined in the opening scenario of the 80's of scarce resources and increased demands for accountability.[29] Without doubt the ability to exert managerial control is enhanced with the availability of good systems.

Systems

Computers are becoming more sophisticated, smaller in size, and less expensive. During the past four years, the cost of electronics has been going down 30 percent a year and the cost of storing information has gone down 50 percent per year. It has been predicted that by late 1981 a 500 dollar million-byte computer will be unveiled. The possibilities that a computer of that size and price would bring to higher education and the home, are almost undreamed of. It seems safe to believe that

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computers will cost only about one-tenth as much by the end of the 80's as today's machines—and will be four times as powerful. Software development is also advancing rapidly although without the dramatic decrease in cost.[30]

Such continuing cost/performance gains and declining computing costs are important because this is one of the few areas where inflation may be successfully fought through increased productivity. In this context we need to educate management (even computer center management) and potential users on how to exploit this technology.[31] Indeed such technology coupled with the cost/performance gains brings the urgings of B.E. Cherrington toward academic administrators to use cost analysis in academic decision-making into the realm of reality.

Dr. Cherrington states:

A good institutional management tool could consist of a central data bank containing general student, staff, faculty, and financial information into which unit managers, including department heads, could tap. Comparative data from the AAU data exchange (or the best equivalent for the institution) might also be included. Remote computer terminals would permit access to the data along with the use of the central computer for analysis. For departments or colleges that would like to process and store a significant amount of "local" data, low cost minicomputers with telephone tie-ins to the central data bank offer the maximum flexibility.[32]

The quotation alludes to the concept of Distributed Data Processing (DDP). Some believe DDP to be the answer to the centralization versus decentralization issue primarily because it appears to offer the advantages of each without the disadvantages

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of either, i.e., low cost, central management control, and local operational autonomy. Such advocates are quick to add, however, that DDP must be controlled and that without adequate controls potential savings will be lost and difficult new problems will come about.[33]

The goal of Pepperdine is to continue moving toward the completion by the end of 1980 of a system similar at least to the one described above. There are plans for DDP activities in the application areas of accounts receivable, admissions/recruiting, and payroll/personnel with other areas being considered.

All of the integrated systems have retrieval modules that permit the extraction of ad hoc data with relative ease. Subsets may also be created which allow statistical manipulation through the use of SPSS or Biomed.

The institution is also using the Educom Financial Planning Model (EFPM) available through Edunet to build a university budget model and a university cash flow model.

A major systems concern for Pepperdine and for other institutions who chose to move in a similar direction is that of providing an information analyst or interpreter. We believe it is unrealistic to expect administrators to be experts in data base management, computational schemes, budgetary coding procedures, and the numerous fine points in accounting or student records that are necessary to formulate an accurate, consistent, and reliable information study. The administrator(s) and the information

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analyst should discuss what decisions are to be made, what data are necessary to support those decisions and, finally how the data can be properly obtained from institutional records. Cooperation and compromise are essential if the information needs of several administrators are to be meshed into a general request. However, the request must reflect the administrators' requirements rather than the analyst's desires.[34]

Ideal personality traits for such interpreters would include: good judgment and considerable objectivity; creativity and imagination; human relations skills such as leadership, tact, diplomacy, and helpful concern; and the ability to communicate verbally, in writing and perhaps graphically.[35]

In the past at Pepperdine, the Information Systems Coordinator (ISC) positions most closely fit these rather restrictive descriptions. The ISC's are the primary liaisons between Computer Services and the user community.[36] We are presently attempting to train individuals with similar attributes and abilities in the Controller's Office, the Registrar's Office, and in the Office of Institutional Research/ Planning. This circumstance is brought about because of increased user demand and greater ISC involvement in system design and modification.

Communication

It should be obvious, but it does not always seem to be, that there is not and cannot be such a thing as the MIS. There are many different systems which sometimes do and other

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times do not relate. These systems are designed to provide administrators with information needed in discharging their responsibilities which range from making current decisions about nonrecurrent problems to reporting to government agencies in prescribed formats. The systems are constantly changing, and it is rare to find an administration that is satisfied with its MIS.[37] The authors of this paper contend 1) that the systems that work best are those with the most effective communication channels and 2) that the life blood of planning is communication. The following statement lends support to the contention.

> Communications may be considered at four different levels of analysis. One is intrapersonal, which relates to how an individual takes in, processes, and produces communications. A second is interpersonal, which deals with interactions between individuals and groups. Third, is the flow of communications in channels in organizations, both formally and informally. Fourth, are systems of data flow including computer applications. The more efficient these systems are the better will be implementation of policies and strategies.[38]

The managerial involvement for various levels of administration depicted in Figure 2 has been at least partially designed to facilitate communication at each of the levels mentioned above. The same can be said for the definitions of role functions for the ISC's, the Systems and Planning Ombudsperson, and the new roles being created in the other offices mentioned in the last section of this paper. Various other methods which have met with some success have been implemented to improve communication channels at Pepperdine.[39]

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In all honesty, however, it must be stated that one of our ongoing

systems problems and one of our real challenges in planning

continues to be inappropriate communication.

A final thought regarding communication comes from two axioms

set forth by a university president on effective administration.

> The secret cement of any organization is trust.
> Almost anything will work when enough trust is
> present. Without it, nothing works.
>
> Use the established channels for action. Haphazard
> approaches to problem solving breed confusion.
> Consistency is a form of integrity.[40]

One of the greatest contributors to a breakdown in communication

channels must be lack of trust and conversely one of the greatest

contributors to building communication channels is consistency.

Decision-making obviously based on an established rationale leads

to the use of channels which feed data--both formal and informal

channels and soft as well as hard data.

Conclusion

The decade of the 80's will be an era of increasing complexity,

scarcer resources, and more rapid change. These circumstances

will force private institutions of higher education to do more

formalized and more effective planning, or they will be hard

pressed to survive.

Three key factors which lead to sound decision-making are:

1) significant involvement from all levels of management tying

strategic planning, tactical planning, managerial control, and

the feedback/modification processes together in a synergistic manner.

2) Systems that are designed to meet organizational needs, i.e.,
systems that can provide good, accurate, and timely information;
and that are adaptable to the needs of the future. 3) A communi-
cations network that ties the subsystems together contributing
to points one and two by keeping information flowing freely
that realistically addresses intrapersonal, interpersonal,
organizational and data flow needs.

Planning for the 80's is an activity that requires from
management a creative artistry not unlike that of seasoned actors
in a play in which the curtain is about to rise but without
the cast having benefit of full rehearsal or script--just a vague
plot to guide their "ad-libs." Like those actors we in private
higher education will wait for audience reaction to determine
our ultimate success.

FOOTNOTES

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[10] Howe, Change, p. 31.

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[34] Cherrington, _Educational Record_, p. 188.

[35] Seaman, _College and University_, p. 9.

[36] For a full description see the previously mentioned Penrod and Craft articles.

[37] Steiner and Miner, _Management Policy_, p. 263.

[38] Ibid.

[39]See footnote 36.

[40]Donald E. Walker, <u>The Effective Administrator</u>, Jossey-Bass, San Francisco, 1979, p. 195.