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ABSTRACT

This document is one of five manuals designed to improve management practices in Ohio two-year colleges. Chapter I is introductory and discusses the role of program budgeting in higher education, its objectives, management, and development. Chapter II presents the steps to be taken in developing a program budget--identifying goals and objectives, identifying programs, selecting appropriate output indicators, calculating resource requirements, comparing required resources to available resources and setting priorities, allocating resources, and managing and evaluating the program. Chapter III discusses the administrative organization of program budgeting. Chapter IV concerns the human, financial, and material resources required for program budgeting. Chapter V discusses the characteristics of a program budget plan and suggests sources of data for program budget development. Guidelines for developing goals and objectives, examples of output indicators, sample program budgets, sample forms used to develop a program budget for a college, a brief discussion of some of the analytical services and tools available, budget preparation models, a bibliography, and a comprehensive glossary of budgeting terms used in higher education are appended. (DC)

PROGRAM BUDGETING

Two Year Colleges

Management Improvement Program

Ohio Board of Regents

MIP

Prepared by a task force of two year college representatives with direction and staff assistance provided by the Ohio Board of Regents

July 1, 1973

Additional copies of the manual are available for $3.00 from the Ohio Board of Regents, 88 East Broad Street, Suite 700, Columbus, Ohio 43215.

Foreword

This manual is one of ten completed in the Management Improvement Program (MIP) during the 1971-73 biennium. In this project, Ohio's 34 public universities and colleges, in an effort directed and staffed by the Ohio Board of Regents, have developed manuals of management practices concerning institutional planning, program budgeting, personnel management, computer services, and schedule building and registration. The project is unique in at least two ways—the improvement of internal management processes is the objective of the program, and the method of undertaking it was mandated by the Ohio General Assembly to be participatory.

House Bill 475, the appropriation act passed by the 109th General Assembly in December, 1971, created the MIP, directing that it be conducted by and within the system of state-assisted universities and colleges under the direction of the Ohio Board of Regents. This legislative action culminated more than four years of active interest by the legislators in improving the management practices of these schools.

In 1967, a joint House-Senate committee, called the Education Review Committee, was created by the General Assembly. Included in its charge was that of monitoring the management practices of the public universities in Ohio. This committee, in conjunction with the Department of Finance, hired a management consulting firm to perform a management study of the nonacademic areas of the 12 public universities and of the state system as a whole. The report of the consultants, published in December, 1969, made about 100 specific recommendations for management improvement. The Education Review Committee remained interested in appropriate follow-up of the study. With the aid of another individual consultant, language was introduced in the General Assembly which was included in the appropriation for the biennium. Some excerpts of the actual language are as follows:

> "The purpose—shall be to design, test, and install, in each such institution, the most efficient feasible internal organization, planning process, financial management, budget preparation and management, auxiliary services management, space management and plant operation, purchasing procedures and inventory control procedures, student data systems including admission procedures and student registration procedures, management reporting systems, data processing, personnel management, and library management.
>
> Each project is to be conducted in cooperation with a committee of representatives from state-assisted colleges and universities.
>
> The director of each project is to be a staff specialist in the employ of the Board of Regents.

FOREWORD

For guidance in the conduct of each Management Improvement Project, the participants are to consult the findings as set forth in the 1969 Consultant's Report."

Primarily because the appropriation to carry out the program was not commensurate with the depth and breadth of the tasks spelled out in House Bill 475, the scope of the Management Improvement Program in this biennium was restricted to five central areas (Institutional Planning, Program Budgeting, Computer Services, Schedule Building and Registration, and Personnel Management). In addition, the original mandate of H.B. 475 was "to design, test and install the most efficient, feasible procedures" in each of the areas in each of the institutions. Because of the limited time, only 18 months, and the participatory method of undertaking the project prescribed in the bill, the immediate objective set forth in the past biennium was the generation of a manual of best practices in each of the five areas.

As stipulated by the legislature, task forces of institutional representatives were appointed and actively participated in the process. Ten such groups were formed; five for the universities and five for the community and technical colleges. Each task force consisted of representatives qualified in the particular subject matter under study. Each group had at least one member from every school. In total, more than 175 college and university personnel from all over the state were directly involved, as well as many others at each institution through formal and informal contact with the appointed members. Each task force met 8-10 times in the year and a half devoted to the project.

As specified in the legislative bill, the Ohio Board of Regents provided direction and staff for the project. Four professional management analysts, two secretaries, and limited part-time analytical and clerical help constituted the manpower to fulfill that charge.

Three major phases constituted the project:

1. **Inventory the current practices.**
   This phase involved compiling the existing practices and procedures in the five areas at each state-assisted school in Ohio. Approximately five months were devoted to this task.
2. **Determine the issues to be addressed in the manuals.**
   Three months were devoted to discussions about the specific issues to be covered.
3. **Write manuals.**
   Nine months were devoted to writing the manuals. This phase included extensive and detailed discussions by the task forces, much drafting and redrafting by the staff and task force members, and finally concurrence with the manual contents.

The Manuals are practical, informative and useful. For the most part, all of the manuals contain general guidelines, principles and broad recommendations for good management within the universities and colleges, rather than detailed and specific procedures. They also include recommendations which call for direct action by the Board of Regents. Basically, the recommendations seek more effective internal management and accountability, while recognizing the autonomy of each school.

Literally hundreds of people have been involved in this project. All mem-

bers of the Ohio Board of Regents staff, especially former Chancellor John Millett, and Vice Chancellor William Coulter, have made significant contributions to the entire project. The Regents were particularly fortunate in gathering together the staff for the MIP. Dr. Ronald Lykins, Mr. Lawrence O'Brien, Mr. Douglas Smith, and Dr. Joseph Tucker brought with them considerable experience and knowledge from administrative and academic aspects of colleges and universities, as well as from private industry. Their perseverance and leadership in directing and staffing the task forces were superb. Special thanks must be given to Mrs. Betty Dials, the secretary for the program, who was an inspiration to all.

Many agencies in other states, including colleges, universities and state systems, were contacted and in some cases contributed helpful data to the program. Applicable professional organizations were also contacted and did help.

But more than any other, however, the contributions made by the individual task force members must be mentioned and expanded upon. The more than 175 personnel from the 34 colleges and universities who were the official representatives for their schools contributed long hours, data, ideas, constructive criticisms, changes, and encouragement. They not only worked collectively in the task forces, but also were required to spend considerable time on the respective campuses gathering data together and communicating with many campus constituencies to make sure that their schools were fairly and adequately represented.

The two-year college program budgeting task force members were:

R. N. Adams, Executive Officer
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James Biddle, Director
Lima Technical College

Barry Blacklidge, Controller
Sinclair Community College

Thomas D. Bowen, Manager of Business Affairs
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FOREWORD

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Robert M. Hollier, Director of Business Affairs
Stark Technical College

William B. Coulter, Vice Chancellor for Administration
Ohio Board of Regents (Chairman)

Ronald G. Lykins, Associate Director of Management Services
Ohio Board of Regents (Task Force Director)

Without their sincere participation, this manual would not exist.

Gerald L. Shawhan, Director
Management Improvement Program

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Preface

PROGRAM BUDGETING FOR OHIO'S TWO YEAR COLLEGES

This manual recognizes there is a wide spectrum of budgeting practices in today's colleges and universities. In particular, colleges in Ohio are at different stages in their utilization of program budgeting principles and also have different needs. Thus, this program budgeting manual was written to meet the specific needs of colleges in Ohio. The basic principles forwarded by this manual should be of importance and application to other public and private colleges throughout the United States.

It should be emphasized that an effective program budgeting process requires a commitment of space, money, people and time. It requires a commitment of the Ohio Board of Regents and the Legislature to work with individual colleges to improve the budgeting process and to help provide the necessary financial support. However, most of all, successful program budgeting requires a commitment of college presidents and top level administrators.

The development of the manual has been characterized by a spirit of cocperation and a commitment of all the colleges to improve the budgeting process. Credit for this project must be given to all the college Task Force representatives who devoted their time and energy to make the manual a reality.

Ronald G. Lykins, Director
Two-year College Program Budgeting Task Force

PROGRAM BUDGETING

Two Year Colleges

1. Introduction

ROLE OF PROGRAM BUDGETING IN HIGHER EDUCATION

Budgeting Environment

Educational Institutions and State Government agencies are facing a financial crisis. Compounding this problem is the fact that these agencies have often experienced harsh criticism calling for a better job of spending the publics' money and meeting society's needs.

Legislators and other public officials are responding as never before and demanding that these various agencies prove themselves accountable. Educational institutions are especially vulnerable to public criticism and are finding themselves in an increasingly competitive position with welfare, urban affairs, social services and other state government programs. Historically, public confidence in education has insured adequate and continuing funding. Not anymore! As never before, legislators and state officials are questioning the value of conventional curriculum and the wisdom of certain programs. Indeed, there is severe competition within the field of education.

Governors, legislators and educational officials are demanding and beginning to receive precise documentation from institutions of higher education. This necessitates that an institution be able to identify and document the need and value of its programs, and satisfy the public's demand for a sufficient return on its investment in higher education. Thus, this competitive environment and the demand for educational institutions to be more accountable sets the stage for institutions to develop a program budget.

Objectives of a Program Budgeting System

The term program budget has many interpretations. Before the term is precisely defined for use in this manual, it is im tant to agree on the objective of a program budgeting system. These are:

1. To assure a financial plan has been developed and approved for the institution.
2. Assuring the budget is allocated in relation to the Institutional Plan.
3. Assure a systematic and rational consideration has been given to the expected acquisition and expenditures of monies for the attainment of goals and objectives.
4. Establish a means to identify, rank and coordinate programs that reflect institutional priorities.
5. Provide a management tool to control and evaluate expenditure of resources for programs.
6. Provide a vehicle for institutions to describe their financial requirements and to present a case for funds.
7. Provide accountability for expenditures to the various sponsors,

users and constituencies of the university, (faculty, students, alumni, OBR, State Finance Department, Legislature, Governor, taxpayers, etc.

8. Provide a vehicle for participation and involvement of faculty, students and other interested parties in the operation of the institution.

Definition of Program Budgeting Terms

In addition to awareness of the objectives of a program budgeting system it is necessary to identify several terms to establish the meaning of a program budget. These terms are:

Goals — the desired end results set for a program. Goals are generally set for long periods of time (e.g., 10 years). Goals and objectives are often used interchangeably; however, they differ with regard to time frame, measurability and sequence. Goals are long-range in scope, and regarded as the end result. Objectives are short-range and are considered progressive steps in the direction of attaining a goal.

Objectives — the measurable attainments or desired results set for programs over a short period of time (e.g., one year). A series of objectives should lead to one's goal.

Outputs — that which is being produced. The products and by-products of a process, system or program. Examples of output indicators are credit hours, headcounts, contract hours, number of graduates, number of research publications, number of public service projects, etc.

Priorities — the established relative importance of specific activities related to the achievement of goals and objectives.

Alternatives — presenting a choice of programs or plans.

Resources — personnel, space, operating support services, (supplies, travel, etc.) and equipment. Before budgetary decisions can be made, resources must be converted to dollars and cents.

Program Management — the supervision, control and coordination of programs.

Evaluation — a systematic process for determining or estimating the effectiveness of a particular program or program component. Evaluation of programs is based on a comparison of actual results with planned results or objectives.

Programs — a group of related activities used to achieve a goal or objective. Programs set forth the output to be realized, the activities to be carried on, and the resources to be consumed over a given period of time.

Specifically, a program is any unit or group for which a program is determined. The program may be a traditional organizational unit such as a department; it may be a more sophisticated unit such as the OBR Technical Studies Program; it may be an individual course, etc.

In short, programs must be identified and agreed upon, but should always focus on outputs.

Definition of Program Budgeting

A definition of program budgeting can now be offered with the established definitions and objectives of a budgeting system in mind. As used in this manual, program budgeting is defined as financial planning that involves a systematic consideration of the following:

1. The establishment of goals and objectives of programs for specific outputs;
2. The analysis of programs and selection of alternatives and priorities;
3. A systematic consideration of the management of total resources;
4. The conversion of priority programs into dollars and cents with a commitment for a specific period of time, e.g., one or two years; and
5. The establishment of a program management system to monitor and evaluate programs.

A program budget is a product of the planning process, and is constantly reviewed, evaluated and updated to meet changing goals and objectives within the constraints of available resources.

The Program Budgeting Debate

Much has been discussed and written about budgeting, line item budgeting, zero based budgeting, program analysis, program budgeting, Planning Program Budgeting System (PPBS), Planning Program Budgeting Evaluation System (PPBES), etc.

The superiority of program budgeting systems has been acclaimed while line item budgeting has been regarded as archaic. Proponents of program budgeting assert that line item budgets are not useful management tools. Supporters of line item budgets maintain that program budgeting advocates can neither define program budgeting nor cite examples of its successful implementation. And so the debate over program budgeting is intense.

Program budgeting as used in the manual is a plan which reflects the characteristics that we have described in our definition of program budgeting. The program budget is a product of the planning process.

The Ohio Board of Regents has selected the term **program budget** because it is believed this term is descriptive of what a financial plan should reflect. The emphasis in this manual is on improving the planning process which will result in a better Financial Plan of how resources will be allocated and utilized for individual institutions.

PROGRAM BUDGETING AS A MANAGEMENT PROCESS

The Management Process

Management may be defined as the art and science of working with and through people in order to achieve organizational goals and objectives. The fundamental functions of management are often designated as: planning, organizing, implementing (actualizing) and controlling. These functions are described graphically in Figures 1.0.

The first essential function to be performed by a manager is to determine what must be done by the members of the organization in order to accomplish the work. This requires an ability to look ahead purposefully. In short, **planning** is defined as a process that attempts to predetermine a course of action. A product of the planning process is plans.

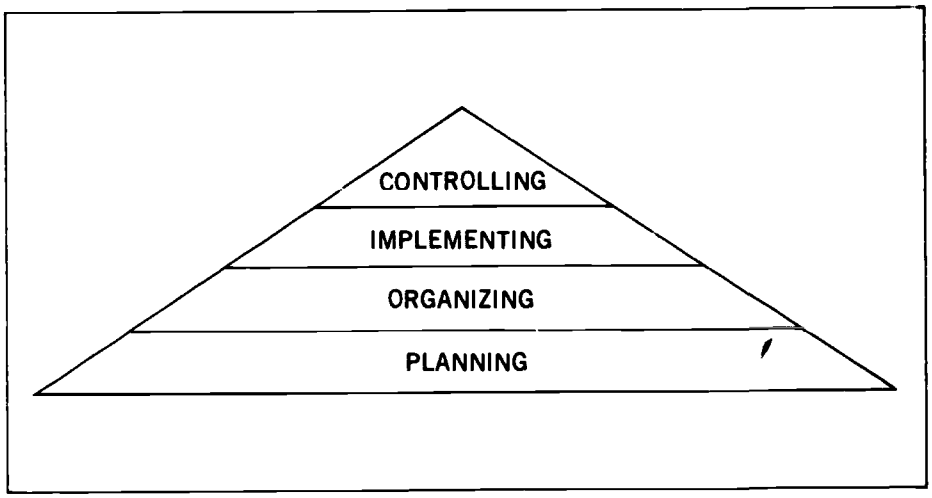
The next step in executing the plan is to distribute or allocate the necessary component activities among the members of the group. This work of allocating tasks, delegating authority and establishing relationships is refer-

red to as **organizing**. It may be thought of as making the plan meaningful to each member of the group.

To carry out the activities established in the planning and organizing steps, it is necessary for the manager to take measures that will start and continue actions as long as they are needed in order to accomplish the task. This management process is referred to as **implementing**. Implementing is a fundamental function of management.

Figures 1.0

FUNCTIONS OF MANAGEMENT



Managers have always found it necessary to "follow-up" that which is being accomplished to insure the work of others is progressing satisfactorily toward predetermined goals and objectives. The establishing of a good plan, a sound organization and successful implementation, do not necessarily assure the plan will be a success. Discrepancies, imponderables, misunderstandings and unexpected hindrances may arise. Such contingencies must be recognized quickly by the manager so that corrective action may be taken. Answers are sought to the questions: "How well should the work be done?" and "How well is it being done?" This function by the manager constitutes **controlling** and is fundamental to the management process.

Four functions of management — planning, organizing, implementing and controlling — constitute the management process. These four fundamental functions of management are inextricably interwoven and interrelated. The performance of one function does not cease entirely before the next is started. And in actual practice, the functions are not carried out in a particular sequence, but rather as the situation being considered seems to require.

The Planning Management Process and Program Budgeting

Over a period of time, however, and in a given case, certain managerial functions tend to precede others, and/or require greater emphasis. This is true of planning, which permeates all the functions of management. Indeed, as pointed out in the Management Improvement Program Planning Manual, planning must occur for planning, organizing, implementing and controlling.

Simply defined, a budget is a statement of plans, specified in numerical terms, for a future period of time. As such, a budget is a product of the planning process, and is one of the tools used by management in the function of control. Thus, a budget is interrelated with the management process and the planning process.

In the Management Improvement Program Planning Manual, planning is defined as a cyclical process that attempts to predetermine a course of action. The primary products of the planning process are plans. A plan is a document that outlines a complete program of action to follow in attaining goals and objectives. As such, a plan should reflect the planning process by which it was developed.

One of the most important plans that results from the planning process is a financial plan — the program budget, see Figure 1.1. Thus, a program budget is a product of the planning process.

Steps in Developing a Program Budget

The steps in developing a program budget are as follows:

1. Agree upon goals and objectives for specific outputs (Consider priorities)
2. Identify programs (Consider alternatives)
3. Calculate resource requirements of programs
4. Compare resource requirements to available resources
5. Allocate resource requirements (Consider alternatives and priorities)
6. Establish a system of program management
7. Evaluate results with pre-established goals and objectives.

PURPOSES OF THE PROGRAM BUDGETING MANUAL

Specific Purposes of the Manual

The overall purpose of the manual is to improve the management process by setting forth sound approaches and practices for program budgeting.

Specific purposes of the program budgeting manual are:

1. To provide educational administrators with an organized and logical discussion of the program budgeting process.
2. To provide a means of sharing the effective budgeting practices which have been developed at different institutions.
3. To provide practical and useful ideas which could be used to improve budgeting practices at individual institutions.
4. To provide criteria of program budgeting which can be utilized by individual institutions to evaluate and improve their present budgeting systems.
5. To provide reasonable guidelines for the process of estimating and allocating institutional resources relative to a given set of programs.
6. To provide a glossary of budgeting terms.
7. To provide a bibliography of program budgeting literature.

Figure 1.1

SHORT, INTERMEDIATE AND LONG-RANGE PLANS

PRODUCTS OF THE PLANNING : ROCESS

I. Ohio Board of Regents Master Plan

II. The Comprehensive-Institutional Plan

A. Foundation Plan
1. Role and Mission
2. Goals and Objectives (institution-wide)
3. Enrollment Projections
4. Faculty and Staff Projections
5. Management Information System
6. Organizational Plan

B. Educational Plan
1. Instructional Program
2. Research Program
3. Public Service Program
4. Financial Aids Program
5. Auxiliary Services Program
6. Library Services
7. Student Services
8. Plant Operation and Maintenance Services
9. General Administration Services

C. Physical Development Plan
1. General Guidelines
2. Land Component
3. Building Component
4. Major Equipment Component

D. Financial Plan
1. Operating Budget Component (Income and Expenditures)
2. Capital Budgt Component (Income and Expenditures)
3. Long-range Financial Plan

III. Inter-Institutional Plan

A. Among State-assisted Institutions

B. Consortia

Effective Use of Manual

This program budgeting manual is primarily intended for the use of directors of finance and business, budget and accounting officers, planning officers and other administrators, and faculty members involved in the planning and budgeting process. It is suggested that the table of contents and the side headings be reviewed by the reader to determine the parts of the manual that appear to be most pertinent. Thus, the reader can skim sections that are familiar and concentrate on in-depth reading where it is appropriate.

Disclaimers

The overall purpose of the program budgeting manual is to provide a guideline for the state colleges in Ohio to make improvements in the budgeting process. Colleges in Ohio are at different stages in their utilization of formal program budgeting procedures. This manual itself is not perfect, nor does it claim to have 100% agreement. However, this manual should provide some clear direction as to what constitutes a formalized program budgeting process, and what can be expected from an institutional program budgeting process. Thus, this manual should enable an institution which is in the infancy stages to rapidly improve its program budgeting process. This manual should also permit those institutions in more advanced stages to make whatever refinements are needed. Although complete adherence to this program budgeting manual is not expected; it is expected that all institutions will be able to demonstrate that an effective program budgeting process does exist by being able to document its program budgeting process in relation to this manual.

Planning and Program Budgeting in Relation to MIP

Planning is the indispensable ingredient of any functional area of an organization. Thus, institutional planning is the foundation for program budgeting, personnel management, registration and class scheduling, and computer services. In this particular manual, attention is focused on developing a program budget.

Because the program budget is a financial plan and a product of the planning process, these two manuals will be closely related. Indeed, the major differences will be the focus and amount of detail. The planning manual is designed to give **general** guidance in the planning process for developing any type of plan, e.g., an educational plan, foundation plan, campus master plan, financial plan, etc., see Figure 1.1. The program budget manual is designed to give **specific** guidance in developing a type of financial plan.

2. Steps in Developing a Program Budget

Chapter Two is devoted to a detailed discussion of each step that is required in developing a program budget for all fund groups of the college. These steps are:

1. Agree upon goals and objectives within the context of outputs (Identify priorities).
2. Identify programs (Consider alternatives)
3. Calculate resource requirements of programs
4. Compare resource requirements to available resources. (Consider alternatives and priorities)
5. Allocate resource requirements (Consider alternatives and priorities)
6. Establish a system of program management
7. Evaluate results with pre-established goals and objectives.

IDENTIFICATION OF GOALS AND OBJECTIVES

Goals and Objectives Defined

The first step in developing a program budget is to identify goals and objectives in the context of outputs. Goals are defined as the desired results set for long periods of time (e.g., ten years). Goals and objectives are often used interchangeably; however, they differ with regard to time frame, measurability and sequence. Goals are long-range in scope and regarded as the end result. Objectives are short-range and are considered progressive steps in the direction of attaining a goal. Objectives are designated as the measurable attainments or desired results set for programs over a short period of time (e.g., one year). A series of objectives should lead to one's goal. Goals must be established before objectives are specified.

To be most meaningful, goals and objectives should be specified in terms which deal with stated outputs. That is, the goals and objectives should relate to that which is being produced.

Requirements of Goals

The requirements of a goal are that it:

1. Be in agreement with the institution's philosophy,
2. Be compatible with the aims and mission of the institution,
3. Be divisible into objectives,
4. Be feasible,
5. Reflect predictable consequences, and
6. Have a long-term time frame for completion.

STEPS IN DEVELOPING A PROGRAM BUDGET

Requirements of Objectives

The requirements of an objective are that it:

1. Relate to a goal,
2. Be measurable or observable,
3. Identify the specific group to which the objective applies, i.e., the target group,
4. Specify the method of measurement,
5. Specify the criteria for evaluation,
6. State the conditions under which measurement of the achievement of the objective is to be accomplished, and
7. State the time period for achievement.

Written Goals and Objectives

To be a useful management tool, goals and objectives should be specified in writing.

Importance of Goals and Objectives

The establishment of goals and objectives is one of the most important and difficult steps in planning for a program budget. Goals and objectives are important because they:

1. Are the necessary first steps in establishing the direction in which a unit should proceed.
2. Tend to require a rational study and approach for managing a unit.
3. Provide a means of selecting priority and alternative programs on a basis other than dollars and cents.
4. Provide a means of evaluation.
5. Provide targets to which all parties relate.

Guidelines in Developing Goals and Objectives

A detailed discussion of establishing goals and objectives is presented in the MIP planning manual. Specifically, a technique for developing goals and objectives is offered as a guideline for college administrators in Appendix 1 of the planning manual.

Goals and Objective Policy Recommendations

As related to developing a program budget, the following policies are recommended:

1. **Every budgetary unit should have stated goals and objectives, with appropriate indices of performance.**
2. **Administrative units should not review and consider budgets of a reporting department or division until that particular organizational unit has prepared:**
   a. **A statement of goals and objectives**
   b. **A description of how the goals and objectives were developed. Who was involved?**
   c. **A statement of how often goals and objectives are updated and evaluated.**
   d. **If applicable, an evaluation of previously established goals and objectives.**

3. **There should be a systematic evaluation of institutional goals and objectives before resources are calculated and allocated in a budgeting process.**

Responsibility for Formulating Goals and Objectives

The governing board of the institution should have assurance from the president that goals and objectives have been stated for each budgeting unit. The president of each college should designate chief officers, e.g., director of academic affairs,director for business and finance, etc., to be responsible overall for insuring that goals and objectives are in fact being set in support of the program budgeting process.

Limitations and Improvements of Goals and Objectives

It is recognized that establishing goals and objectives is a difficult but vital planning step in developing a program budget. Persons should not be discouraged if the first attempt to develop and agree upon goals and objectives is less than satisfactory. Through repeated efforts of developing and evaluating goals and objectives coupled with an educational program, the goals and objectives should become more useful and meaningful.

IDENTIFYING PROGRAMS

Definition of Programs

The next step in developing a program budget is program planning, (the identification of a program structure). John D. Millett states that program planning is concerned with the increments of action needed to realize stated objectives of the enterprise. A number of definitions and general observations are necessary before moving into a consideration of the existing programs in Ohio.

There appears to be fairly widespread agreement on the definitions of a program. The following statements are representative:

1. Robert T. Sandin asserts that a program is a group of interdependent coordinated activities, conducted by an operating unit, which mutually contribute to the realization of a common objective.
2. A program is defined, in **Guidelines for Implementing a Planning — Programming — Budgeting System,** as a collection of related activities which are organized to contribute to the accomplishment of specific goals and objectives of the organization.
3. WICHE uses the term "program" to identify the activities and resources contributing to the education of a group of students pursuing a common curricular path.
4. As defined in the MIP planning manual, a program is defined as a collection of related activities which are organized to contribute to the accomplishment of specific goals and objectives in a plan.

Specifically, a program is any unit or group for which a budget is determined. The program may be a traditional organizational unit such as a department; it may be a more sophisticated unit such as the OBR technical studies program; it may be an individual course, etc.

Although there appears to be general agreement on the definition of a program, there is difficulty in clearly defining, identifying and agreeing upon a program structure for colleges. One of the difficulties of identifying a program structure is the elusive nature of the outputs of higher education.

Outputs of Higher Education

Inherent in a Program Budgeting System (PBS) is the measurement of outputs. Every type of organization is expected to produce results, and educational institutions are no different. Business organizations are often measured by the number of units that they produce and by the amount of profit and loss. Although different from corporations in many fundamental ways, educational institutions can be partially measured by the number and quality of units they produce, e.g., credit hours, graduates, public service hours, etc.

There has been much discussion concerning outputs of higher education. Output is defined by Webster as something produced: as the amount produced by a person in a given time. In the instructional program, an output indicator commonly accepted is the credit hour. In fact John D. Millett states that the credit hour is the only satisfactory quantitative statement of output for the instructional process. Although Millett discusses the subject of outputs for other programs and offers a typology of outputs (see Appendix 2), there is less certainty as regards the identification of outputs for other programs. **It is recommended that credit hours be utilized as an output measure where appropriate.**

Student contact hours is another appropriate output indicator in certain areas such as continuing education. This is true because usually no degree credit is given for continuing education. Thus, it is recommended that student contact hours be utilized as an output indicator in continuing education and other appropriate areas.

In addition to credit hours and contact hours it is recommended that the number of graduates be utilized as an output measure at appropriate levels. The number of graduates appears to be an important output measure because most people attend a college in order to obtain a degree.

Each college should know the number of graduates by an appropriate degree level and the cumulative cost of graduating students from the beginning of a degree program to graduation. This task is difficult but it is one that needs to be addressed.

It is recommended that the Ohio Board of Regents staff, with the aid of college officials, address the problem of developing a method to account for the total cost of graduating students from the beginning of a degree program to graduation. It is believed that the present Uniform Information System of the Ohio Board of Regents could be modified to fit this need.

The problem of identifying outputs is much more difficult for noninstructional programs, such as student aid, public service, etc. One output indicator used is the dollar amount of student aid per FTE student. An output measure of this nature is useful in identifying program trends and for raising questions. For example, Table 2.0 indicates that the dollar amount of Student Aid per FTE increased 20% between 1971 and 1972. The budget analyst may then ask the question, "Is this a desirable trend; is it in line with objectives?" To answer this question, further analysis would be required, i.e., compare this trend with other program trends.

For example, Table **2.0** indicates the average percentage increase for all the programs was 5.8%. This indicates the student aid program is growing faster than the average program. The analyst must again answer the question of desirability and relationship to goals and objectives.

Figure 2.0

ILLUSTRATION OF OUTPUT INDICATORS

FOR A COLLEGE

Dollar Amount of Services per FTE

by Programs

PROGRAM	1970-71 $ Am't of Services Per FTE	1971-72 $ Am't of Services Per FTE	$ INC. or (Dec.)	% INC. or (Dec.)
INSTRUCTIONAL PROGRAMS	$197.	$213.	$16.	8.1%
PUBLIC SERVICES	16.	11.	(5)	(31.2)
STUDENT AID	10.	12.	2.	20.0
TOTAL	223.	236.	13.	5.8%

Fall 1970 FTE = 1,916.
Fall 1971 FTE = 1,884.

Enrollment
Decrease 32 or (1.7%)

As a general rule, one output indicator is never sufficient for purposes of analysis. Others must be used: e.g., dollar amount of public service expenditures per FTE faculty member, number of public service projects, etc.

Because there is no commonly accepted output measure for every program, **each budgetary unit and/or program should have the latitude to specify those standards deemed most appropriate for that particular unit.**

It is recommended that more than one output indicator should always be utilized where appropriate. It is important that output indicators should be used over a period of several years in order to make significant comparisons.

It should be noted that outputs may be different from an internal perspective than from an external perspective. For example, an appropriate internal output measure of a service department may be the number of courses taught. Whereas an external agency such as the Ohio Board of Regents might be most interested in credit hours.

For the above reasons, **output measures should be agreed upon by appropriate administrators and expressed in writing, and should be an integral part of every program budget.**

Relationship of Output Indicators to Input

In addition to output measures it is often helpful to make comparisons of "output indicators" to "input '. For example, Figure 2.1 shows the dollar amount of income per FTE by program level. Again this type of analysis is helpful in identifying problems and raising questions. For example Table 2.1 illustrates that the dollar amount of **income** for Instructional Programs increased $18.00 per FTE between 1971 and 1972. Table 2.0 reveals that the dollar amount of instructional programs expenditures increased $16.00 per FTE. This means income generated from instructional programs must be utilized to subsidize other programs. This may be a very desirable trend. However, college administrators must make this decision within the realm of institutional goals and objectives.

Figure 2.1

ILLUSTRATION OF INPUT INDICATORS

FOR A COLLEGE

Dollar Amount of Income per FTE by Programs

PROGRAM	1970-71 $ Am't of Income Per FTE	1971-72 $ Am't of Income Per FTE	$ INC.	% INC.
INSTRUCTIONAL PROGRAMS	$217.	$235.	$18.	8.3%
PUBLIC SERVICES	15.	11.	(4.)	(26.7%)
STUDENT AID	5.	7.	2.	40.0
TOTAL	237.	253.	16.	6.8

Fall 1970 FTE = 1,916.
Fall 1971 FTE = 1,884.

Enrollment Dec. = 32. or (1.7%)

Examples of Programs

One of the difficulties in defining and visualizing programs is the disparity and vagueness of programs as found in educational planning literature. For example, the WICHE-NCHEMS classification of programs is as follows:

The Educational Institution

I. Primary Programs
   1.0 Instruction
      1.1 Regular Instruction
      1.2 Special Session Instruction

1.3 Extension Instruction (for credit)
1.4 Experimental Instruction
2.0 Organized Research
2.1 Institutes and Research Centers
2.2 Individual or project research
3.0 Public Service
3.1 Departmental Continuing Education
3.2 Organized Extension Continuing Education
3.3 Organized Extension Community Service
3.4 Campus Community Service
3.5 Agriculture Extension Service

II. Support Programs
4.0 Academic Support
4.1 Libraries
4.2 Museums & Galleries
4.3 Audio/Visual Services
4.4 Computing Support
4.5 Auxiliary Support
5.0 Student Service
5.1 Social and Cultural Development
5.2 Supplementary Educational Services
5.3 Counseling and Career Guidance
5.4 Financial Aid
5.5 Student Support
6.0 Institutional Support
6.1 Executive Management
6.2 Financial Operations
6.3 General Administrative Services
6.4 Logistical Services
6.5 Physical Plant Operations
6.6 Faculty and Staff Services
6.7 Community Relations
7.0 Independent Operations
7.1 Institutional Operations
7.2 Outside Agencies

For budgetary purposes, the Ohio Board of Regents classifies programs as follows:

1.0 Departmental Instruction and Research
1.1 General Studies
1.2 Technical Education
1.3 Baccalaureate General
1.4 Baccalaureate Professional
1.5 Master's Programs
1.6 Graduate Professional
1.7 Doctor's Programs
1.8 Medical Programs
2.0 Sponsored Research
3.0 Public Services
4.0 Auxiliary Services
5.0 Student Aid

STEPS IN DEVELOPING A PROGRAM BUDGET

Process of Identifying Programs and Sub-programs

It would appear that in order to be a useful budgeting concept for colleges the term **program** must be given a more precise identifiable definition than that indicated in the foregoing terms. For example, the foregoing examples of **programs** appear to be suitable, at the highest level, for developing an educational plan for a university but not for a college. Sub-programs have been identified for departmental instruction, e.g., by level of instruction and discipline, or by type of degree. But sub-programs have not been generally defined for noninstructional activities such as public service, administration, etc.

Because of the foregoing ambiguity of programs, it is important that a program structure be specifically designed for colleges in Ohio. It is not important for all two-year colleges to follow or structure the exact same programs. As is discussed in the following section, each school in the course of its planning and operation must structure its own programs. The current Ohio Board of Regents-Uniform Information System set of programs was designed with primarily the universities in mind.

It is recommended that the Ohio Board of Regents constitute a group of two-year college representatives to modify the Uniform Information System, including the program structure, to make it more meaningful to the two-year system of higher education in Ohio.

In summary, resource allocation decisions should be based upon program classification system type data, as well as other qualitative and quantitative means. To assist colleges in Ohio in a program budgeting endeavor, the Ohio Board of Regents must move to modify its Uniform Information System and Resource Allocation Procedures to permit its use by colleges to produce program classification system resource data for its own organization units. A Uniform Information System equally useful at individual colleges and at the state and national level would be an extremely valuable tool for college administrators. Perhaps, this is too ideal or impossible but improvements could definitely be made in the Uniform Information System to make it more applicable for colleges in Ohio.

However, it is imperative that colleges immediately begin working toward a good program structure. Colleges cannot afford to remain inactive until a statewide committee is formed. Colleges must gain additional knowledge and experience with program budgeting. Therefore, the following discussion is presented regarding an ideal and a practical approach to determine a program structure.

Ideal Approach

If program budgeting could be implemented without pressure to produce tangible results in a relatively short period of time, the steps in the development of a program structure would be as follows:

1. Develop college-wide goals.
2. Develop goals for divisions and departments.
3. Develop measurable objectives relating to all levels of the goals.
4. Describe all activities that must be performed to accomplish the objectives.
5. Match activities to the objectives and the goals the objectives support.
6. Combine activities into groups of subprograms.

7. Combine subprograms into programs.
8. Assign responsibility for each program — that is assign program managers.
9. Document the resulting program structures.

The ideal approach demands a great deal of time and effort. Such an approach would require many committee meetings, discussions and decisions. Invariably, there would be long discussions relating to the development of goals and objectives. This ideal approach may not be feasible, although it is the way a program structure should be developed if all the resources were available to accomplish the development. Most colleges cannot design a program structure in this manner because of a lack of resources and the need for immediate tangible results.

Practical Approach

In an ideal situation, the development of activities and their grouping into programs to accomplish institutional goals and objectives would reflect the operation of a fairly rational process. The results would be an ordering of the programs into a rational program structure. A program structure, in other words, is simply another way of describing the organization.

Practically speaking, it does not appear feasible to expect colleges to completely change an organizational structure to fit a program structure. This is true because organizational changes are often made to complement personnel changes. Thus from a practical viewpoint, the following steps can be taken to determine a program structure.

Initial program structure can be developed for a college as follows:

1. Record the existing set of programs as a base.
2. Review existing goals and objectives for the overall college and for the existing set of programs.
3. Add or delete programs as necessary to insure consistency with the goals and objectives.
4. Use the existing assignments of responsibility, except where obvious changes must be made.
5. Document the program structure.

The foregoing methodology is a much more feasible approach for developing an initial program structure. However, a warning is in order. The program structure should be developed in an evolutionary manner. It would defeat the purpose of program budgeting to establish a program structure simply on the basis of the existing organization and not update it to show the results of defining new goals and objectives. In a sense, the college should always be working toward the ideal program structure. There should be a continuing analysis of goals and objectives and regrouping or modifications in programs to satisfy changing goals.

Program Structure Requirements

The following requirements should be considered in developing a program structure:

1. There should be a logical relationship between the specified programs and the objectives of the college.
2. There should be a definite assignment of responsibility to each program.

3. The program structure should be designed in such a manner as to facilitate cost estimating of each program.
4. The program structure should be designed in such a manner as to permit forecasting of effectiveness for each program.

Each of these requirements is discussed in more detail below:

Relationship to objectives — As previously stated, in the ideal case the program structure is designed on the basis of the school's goals and objectives, after they have been completely developed. In the practical case, college administrators should work with the goals and objectives that they have already developed and modify this list in such a way as to substantiate each program in the program structure.

Assignment of Responsibility — In assigning responsibilities for programs in a program structure, the college should begin with the present organizational assignments. Additions or reassignments of program coordinators or program directors may be made as it becomes necessary.

Cost-estimating Feasibility — The programs in the program structure should be delineated in such a way as to facilitate cost estimating. For example, if the physical education program and the health program have traditionally been combined, and the same personnel and the same physical resources are utilized in that program, then the program could be specified as the physical education and health program. However, if it is considered desirable to specify physical education and health as separate programs, then the feasibility of separate cost estimating for physical education and health should be considered at the time the program structure is designed.

Effectiveness — Forecasting Feasibility — In the development of measurable objectives, one aim is to specify those measures of effectiveness that will be used in the eventual evaluation and program analysis of each program. This should be considered in the development of the program structure. The value of program budgeting is very heavily dependent on the measures of effectiveness for each program in the structure. These measures of effectiveness, together with the costs, are used in the eventual allocation of resources, program analysis and evaluation.

Completeness of the Program Structure — The program structure should include all programs in the college. **Each program and responsibility for it should be identified in the organizational structure of the college.**

In addition, it is necessary that programs be separate and distinct to avoid overlapping.

In summary, the practical approach to begin the installation of program budgeting is more likely to satisfy the usual demands for early tangible results than in attempting to start with goals and objectives and work through the program budgeting concepts in a strictly sequential manner. However, development of the program structure should be an evolutionary process. Responsible college administrators should be continually questioning the program structure, and constructing and developing goals and measurable objectives in order to work eventually toward an "ideal" program structure.

After a program structure has been determined, resource requirements for programs must be calculated.

Operating and Capital Budgets

CALCULATING RESOURCE REQUIREMENTS

Resources have been defined as personnel, space materials and equipment. When evaluating resource requirements, colleges must address themselves to both operating budgets (for all fund groups) and to capital budgets. This is true because of the profound affect each type of budget has on the other. For example, a new building funded from capital funds will need operational support for many years in the future. This is especially true after a capital project, e.g., classroom building, has been completed.

When evaluating resource requirements, it is recommended that operating budgets (for all fund groups) and capital budget be jointly considered. Furthermore, it is recommended that the same personnel and organization involved in approving an operating budget should be involved in approving the capital budget.

The recommendation that capital budgets and operating budgets be jointly considered is important at the Board of Regents and legislative levels, as well as the college. In some cases, colleges have submitted a request for capital funds without due consideration of its impact on the operating budget. Also, legislatures have funded a capital project, e.g., a new college, without due consideration of a minimum operating budget until enrollments are of sufficient size.

Estimating Income and Resource Requirements

Too often in the past undue emphasis has been placed on budgeting for expenditures. In extreme cases expenditure budgets have at times been proposed on a departmental or college level without due consideration to income sources.

Thus, **it is recommended that income projections (source of funds) be an integral part of every budget document.** This recommendation should be followed for every organizational unit, at every level, and for all funds.

Guidelines For Estimating Income

Projecting income is a very difficult and complicated process. The ability to successfully project income depends to a greater extent on the knowledge and experience of the individual establishing the projection rather than how it is accomplished. Each college will have its own trained personnel and special techniques for projecting income. Thus, the purpose of this section of the manual is not to provide detailed directions but rather to offer some general guidelines for consideration in projecting income. These guidelines are as follows:

1. **Good income projections are based to a great extent on good enrollment data. Not only should the number of students be accurate but the mix of students should ideally be anticipated. However, this is a most difficult task. The following ideas are offered to help deal with the problem of enrollment projections.**
   a. **Responsibility for enrollment projections must be clearly defined.**
   b. **The personnel responsible for enrollment projections must work closely with those people responsible for income projections.**
   c. **Organization(s) responsible for enrollment projections should work closely with an informed enrollment committee.**

d. **Enrollment projections should be presented in terms of a low-high range and most likely outcome.**
e. **Long-term enrollment projections should be made, perhaps ten years in advance, and regularly updated.**
f. **Records of the assumptions underlying such enrollment projections should be maintained to provide a basis for subsequent evaluation and revision.**
g. **Specific dates for revising enrollment projections should be incorporated with the budgeting timetable.**

2. **All income projections should be stated in writing, and fully documented as to what assumptions are made and what information is believed to be factual.**
3. **Assure that an income projection is made for all fund groups.**
4. **When a project or plan is first conceived, an approximation of potential income should be made. The approximation should become more accurate as projections are updated.**
5. **Where pertinent, income projections should be stated.**
6. **Historical records of income projections should be maintained (in one record book) along with "actual" for the various sources of income, e.g., student fees, state subsidy, etc. Enrollment projections and actual (by mix) should also be incorporated with these records.**
7. **An appropriate officer of the college, as designated by the president, should be responsible for formulating ideas and plans of action to generate additional income. Some of the ideas will be profitable while others will not. The important factor is, that in many cases if an institution makes a concerted effort to generate additional income it can often do so. These ideas and plans should be documented on a regular basis.**

   The results of generating additional income should be publicized within the college community, the board, the Ohio Board of Regents, and the legislature.
8. **Specific responsibility should be assigned to monitor monthly income projections and provide timely reports to the president and other appropriate officials.**

Because the state subsidy is based almost exclusively upon enrollment levels and mix coupled with the fact that enrollments are uncertain, it is extremely difficult to make good income projections. Compounding this problem is the fact that new state subsidy levels are often not ascertained until after the beginning of a new biennium. Also the institution's enrollment level and mix is not known until the autumn of the year. This is of course several months after a fixed year is started and personnel contracts are committed.

The present formula of allocating income to institutions does have some advantages such as equity and a one-year lead time in the second year of the biennium (In some states, e.g., Illinois, the state subsidy level is known only on a yearly basis). However, the major disadvantage of the present subsidy formula is that it is a variable factor and dependent almost exclusively upon enrollment level and mix. This is a problem, particularly when enrollments are declining, because the expenditures of a college are both "fixed" and "variable". Consequently, though income may be declining, certain

"fixed" expenditures will occur, e.g., heating, electricity, mandatory civil service increases, etc.

To assist colleges in making income projections and to better manage its financial affairs, **it is recommended that the OBR in conjunction with a task force of college representatives study longer time frames and new ways of allocating monies to higher education. Along with other factors, it is specifically recommended that the task force study the desirability and feasibility of guaranteeing a minimum subsidy level for a two-year period in advance.**

Budget Models

One of the most important considerations in developing an operating budget is to decide upon a systematic approach.

Appendix 6 provides a number of budget models (e.g. line item, open-ended budget, quota budgeting, etc.), to consider when developing the methodology for calculating resource requirements. The advantages and disadvantages of each budget model are listed.

COMPARING REQUIRED RESOURCES TO AVAILABLE RESOURCES

After income (source of funds) and resource projections have been made, detailed attention should be focused on comparing resource requirements to available resources. This type of comparison should be made on a program by program basis.

For example: Is the income (Source of funds) projection reasonable? What can be done to enhance the possibility of generating additional funds for this particular program? Are the resource requirements (personnel, operating support, equipment and space) reasonable projections? What can be done to reduce the need for resource requirement while still maintaining the effectiveness of the program?

Within the framework of comparing required resources to available resources and the actual allocation of resources it is highly desirable to establish priorities and consider alternatives.

The identification of priorities and the consideration of alternatives are vital aspects of the program budgeting process. As with other aspects of the program budgeting process, the isolation of priorities and alternatives is impossible. The consideration of priorities and alternatives is interwoven throughout the budgeting process.

Priorities

Setting priorities may be defined as the establishment of the relative importance of specific goals, objectives and programs. There are diverse methods for stating them — not all of which refer to the programs suggested in this manual. For example:

1. **Pure Programs Basis:**	**Rationale**
#1 Priority Program — Health Programs	$60,000
#2 Priority Program — Business Program	10,000
#3 Priority Program — Engineering Program	15,000
#4 Priority Program — Public Service Program	15,000
	$100,000

2. **Line Item Basis:**

#1 Priority	— Present salaries	$ 70,000
#2 Priority	— Present operational support	5,000
#3 Priority	— New faculty position	16,000
#4 Priority	— Increment operational support for inflation at 5% ($5,000 x .05)	250
#5 Priority	— 5% salary increases ($70,000 x .05)	3,500
#6 Priority	— Other new programs	5,250
		$100,000

3. **Combination Program and Line Item Basis**

4. **Percentage of Increase, Decrease or Dollar adjustment.** The resulting budget by inference sets priorities.

Alternatives

The term alternatives as used in the planning process refers to the concept of different programs accomplishing the same objectives. Thus, a choice between programs can be made based upon cost-effectiveness or other criteria. This concept is valid in program budgeting as well. (An example is that of considering the cost-effectiveness of two different teaching methods — large lecture and small group discussion versus many small lectures). Colleges have been considering such alternatives for years in their budgeting process, but a systematic process and documentation of this facet was often lacking. **It is recommended that each college continue its efforts at considering alternative programs.** Specifically, the program budgeting process should require the consideration of such alternatives by all parties. **All budget proposals should contain a description of programs considered as well as the reasons for adopting a particular program.**

ALLOCATING RESOURCES

It is not enough to require that every program produce a benefit that is worth its cost. It is necessary also to view both the benefits and the cost of each program in comparison to the benefits and costs of other possible ways to utilize the same resources. An ideal budget is one which produces more valuable results than would be achieved if resources were allocated in any other way. The criticism of budgetary allocations, then, should proceed by way of an attempt to determine not whether each expenditure item represents something that is desirable or necessary in an absolute sense, but whether the planned distribution of expenditures can be expected to bring about results that are more valuable than could be obtained from alternative uses of the same funds.

There are practical difficulties, of course, in implementing such a theory of budgeting. The theory assumes that the results of expenditures are measurable, and that the value of different results can be compared. But the value of services rendered by an educational institution is sometimes hard to specify. Furthermore, it is difficult to compare the value of results

as different as those produced by pure research and custodial service. Consequently, many persons in colleges tend to think of the budget as a compromise of value preferences concerning unlike ends, and they see no common basis for rationally assessing the values produced by expenditures. Budgeting seems to many persons to be an exercise of subjectivity and bias. But the aim of a program budgeting process is to minimize subjectivity and maximize rationality in decisions concerning resource allocations.

Considerations for Installing an Effective Resource Allocation Process

There are four major considerations for installing an effective resource allocation process. These are:

1. **Organization(s) and person(s) must be assigned responsibility for allocating resources.**
2. **Systematic procedures must be delineated for allocating and approving resource request.**
3. **Criteria must be established to help ensure that rational consideration is given to a request for the use of resources.**
4. **An orderly process must be developed to communicate the allocation decisions.**

One of the first considerations in allocating resources is for the president to designate the organization(s) and person(s) responsible for this task. This recommendation is made because of the impact of one resource on another, e.g., personnel on space, space on equipment, etc. Because of the tremendous economic implications, it is vitally important to consider all of the required resources in a plan. This recommendation will ensure that this consideration is made.

In order to adequately support the allocation process there should be a minimum of one director or staff person, who also spends the majority of his time on the budgeting process. Also, each college should ascertain that there are adequate support personnel and other resources available to efficiently operate a program budget system.

Systematic Procedures for Allocating Resources

After a responsible organization has been designated, that organization should proceed to develop systematic procedures for the process of allocating and approving resources required for the various programs throughout the college.

Once again, it should be emphasized that **a program budget should cover all the fund groups within the college (current funds, loan funds, and plant funds).**

Some of the important considerations in the preparation of resource allocation procedures are:

1. Review of national, state and local educational trends and outlook.
2. Review and evaluation of allocation procedures for previous years.
3. Preparation of a manning table of responsibilities and due dates for submitting a request for resources.
4. Review and updating of institution-wide goals and objectives.
5. Identification of and agreement on the program structure that will be utilized in the budgeting process.
6. Identification of and agreement on acceptable output measures.

7. Review and updating of budget forms and directions.
8. Preparation of and agreement on program budgeting guidelines, e.g., programs cannot expand more than X%; salaries for a program cannot average more than Y%; every budgetary unit must eliminate at least one program, etc.
9. Preparation of a checklist or criteria to apply to each budgetary unit that is, submit a budget document.

The following critieria are suggested:

a. Is there an evaluation of last years program budget?
b. Have goals and objectives been established for the budgeting unit? Have outputs and standards been identified?
c. Have programs been identified? Are the programs related to the established goals and objectives? Does the budget relate to the programs? Are the programs in agreement with the institutional program structure? Are the programs compatible with the OBR program structure?
d. Was the prepared budget arrived at through a systematic and rational process? Can the process and chain of events leading to the proposed budget be fully documented?
e. Were alternatives and priorities considered throughout the budgeting process?
f. Have priorities been established in rank order?
g. Has a program management system been established to control and evaluate budgetary units on a timely basis.

10. Preparation of narrative statements or charts to identify the process of approving the allocation of resources, e.g., committee review, open hearings, board of trustees approval, OBR review, etc. Preparation of flow chart which reveals the organizational direction of reviewing allocation procedures.
11. Preparation of statements concerning the manner in which resources will be approved in committee meetings, or by administrators, etc. For example, committee decisions may be an open vote and by a quorum before recommendations are accepted by the president. Statements for allocating resources must be explicit and well understood by all personnel involved in the budgeting process.
12. The powers and the authority to make decisions or recommendations must be clearly delineated for organizations and individuals involved in allocating resources. In particular, the budget responsibilities of the president and the Board of Trustees must be clearly identified.

Criteria for making Allocation Decisions

The third major consideration in the allocation of resources is to develop and follow a criteria for making allocation decisions. In order to do this, a decision must be made to determine the items or areas that will be considered in developing a criteria; and secondly, the importance of each item or area must be determined.

In order to make an intelligent decision for allocating resources, the resources must be placed in perspective with the overall plan. In other words,

the plan must first be evaluated in terms of pre-selected criteria, and then resources allocated in accordance with the available money supply.

Communication and Allocation Decisions

After allocation decisions are made they must be communicated to the constituencies of the college. Some of the possible ways this can be accomplished are as follows:

1. Assign specific responsibility for communicating allocation decisions.
2. Conduct budget hearings.
3. Utilize official budget documents to inform program managers of allocation decisions.
4. Make an official budget available for review by interested parties.
5. Report in newsletters and newspapers.
6. Personal communications to "key" people and other power bases, e.g., faculty senate.
7. Contact reporters for radio and television.
8. Prepare annual reports
9. Conduct regular budget review meetings with program managers and prepare a follow-up report.
10. Encourage wide participation in the budget process.
11. Budget presentation by senior administrator using charts and graphs and other visual aids.
12. Addresses by the president.
13. Conduct an ongoing budget educational program.

PROGRAM MANAGEMENT

Definition of Program Management

Program Management is defined as the supervision, control and coordination of programs. The key to a successful program management system is the identification of programs and responsibility for management thereof assigned to appropriate personnel.

To help ensure an effective program management system several guidelines should be followed. Some are:

1. **A manning table of budget areas and responsible personnel along with their designated responsiblities should be maintained and updated by some central office, e.g., business office or president's office.**
2. **It should be clearly communicated that every academic and nonacademic administrator has budgeting responsibility. The specific responsibility should be clearly identified.**
3. **It should be the responsibility of every administrator or program manager with budgeting responsibility to assure that expenditures do not exceed budget.**
4. **A systematic budget review system must be established by each program manager.**
5. **Where applicable, program management responsibility should be outlined in job descriptions.**
6. **Program managers should be evaluated on a regular basis.**
7. **An appropriate accounting system should be adopted to support the program budgeting process.**

Monitoring Income

In monitoring income, it is of utmost importance to establish responsibility for each source of income. All sources of income need to be monitored but it is especially important to scrutinize key areas: for most colleges these would appear to be (a) enrollments — by level and type; (b) state subsidy as affected by Ohio Board of Regents policy and legislative decisions; (c) Federal grants and appropriations — other than student aid; (d) rotary accounts; (e) student aid; (f) capital appropriations.

Each college should clearly identify key sources of income and set up a system to ensure the governing board of the college that reliable forecasts can be made. Also, it is vitally important that provisions be made for timely warnings to the president when actual income is not meeting or exceeding the projection, and the reasons for the deviation. This system should allow sufficient time for the president or chief financial officer to make necessary budget adjustments.

Monitoring Expenditures

An effective system of monitoring expenditures must be established and maintained to complement a system of monitoring income. This requires that responsibility be identified for controlling budgets. It is suggested that a manning table of responsibility be monitored by the chief financial officer or other central offices.

As previously stated, every administrator with budgetary responsibility should be responsible for a balanced budget at the end of the year. Budget/spending variances should have official approval from the appropriate officers.

A timely reporting system should be developed by the finance office to keep the president informed of budget/spending patterns within the college.

Every administrator who has budgetary responsibility should receive a monthly budget report. Key expenditure items should be identified and scrutinized closely. For most colleges, key expenditures are salaries and benefits. Thus, a system to closely control the additions and replacement of personnel is vital to controlling budgets.

Program Outputs and Fiscal Management

Monitoring income and expenditures (fiscal management) is most meaningful when accomplished under the umbrella of program outputs. That is, a budget is a financial plan which is converted to dollars and cents. A program budget is developed specifically to obtain goals and objectives, within the context of outputs. Consequently the program stucture must be conducive to monitoring income and expenditures regularly in order to adhere to the financial plan and produce the desired program outputs. This means that effective program management and fiscal management cannot be separated.

EVALUATION

Evaluation Process

Closely related to program management, and key component of program budgeting, is a system of evaluation. Evaluation is the feedback loop of the program budgeting system. Some type of evaluation, of course, must appear at every step of the program budget cycle but it deserves special attention as a feedback component.

Evaluation is defined as a systematic process for determining or estimating the effectiveness of a particular program. Evaluation of programs should be based on a comparison of actual results with pre-established objectives.

The evaluation process need not be excessively difficult if a few basic guidelines are followed. The first guideline to remember is that the purpose of evaluation is to compare actual results with expected results. Expected results should be set forth in pre-established objectives. If the pre-established objectives meet the requirements as proposed in the Management Improvement Program planning manual, evaluation will be basically a matter of following through.

In short, **it is recommended that evaluation be based on a system of management by objectives.**

All educational programs are intended to produce some desired changes, within some time period. Thus, it is important that the objectives of a program be clearly stated and meet the criteria of an objective. If this is accomplished, then evaluation is basically a process of meeting with subordinates and superiors and determining the outcomes in relation to the pre-established objectives.

Too often evaluation is avoided because of its apparent complexity and inability to substantiate evaluation with "total" facts. However, the process of evaluating pre-established and actual results, terminates in a judgment and not in a description of facts alone.

Other Considerations for Evaluation

Another key question to consider in evaluation is, **"Did the program operate as it was designed to operate?"**

In addition to knowing that the program achieved its objectives, it is important to know how the program was conducted. Specifically, if a program succeeded or failed, it is important to be sure the program was conducted as it was designed to be carried out. Any changes should be noted. Ultimately, we wish to assess the effectiveness of the program design or the idea behind the program, so that we can decide whether to reject, approve, expand, or modify that design in the future. If we do not ascertain what actually happened during the program operation, we cannot evaluate that design as a basis for future decisions.

In order to monitor the processes in a program there must be a program activity plan. While there are several variants of planning charts and displays, most fall into the categories of activity schedules (Gantt charts) or activity networks, Program Evaluation Review Techniques (PERT), or Critical Path Method (CPM)

Activity schedule charts are useful to the program manager during the operation of the program, and afterward to planners and evaluators who are making decisions about the future.

In addition to finding the results and checking the congruence of the plan and the actual program, many evaluation studies are concerned with demonstrating that the activities actually caused the results. In other words, "Are the results of the program attributable to the program?" Who was responsible for the results?

Perhaps, it was some outside force or program manager that enabled a program to attain the desired results; or perhaps it was by chance. Thus,

it is important in an evaluation process to know how the results came into being and who was responsible.

The process of answering the foregoing questions in the evaluation process should culminate in an evaluation report which should be the basis for determining the statements and decisions that can be supported by the evaluation findings.

Evaluation Report

The evaluation report should be short and direct. It should include the following information:

1. A brief description of the program.
2. A statement of the activities and objectives of the program.
3. A report on objectives which were met, including a description of the measuring techniques employed, and a summary of the data.
4. A report on which activities or events outlined in the program plan were actually achieved by the operating program, which were incomplete or not in accord with the design, or which did not occur at all.
5. A comparison of the program costs relative to a unit of output (or other cost-effectiveness measures).
6. Problems and difficulties of the project.

In evaluating the report, the following guidelines should be observed:

1. Whenever possible distinguish among facts, inferences and opinions.
2. Discuss the report with affected parties.
3. If opinion data are used, identify their source.
4. Do not report on elements that are of no importance to the decision maker.
5. Where pertinent to the report, use charts and tables to summarize data.

Finally, the evaluation report will become feedback in the program budgeting system. The value of the report will be in direct proportion to the impact it has on the future decisions made by planners. Without a good evaluation system, program budgeting will not be very effective.

This discussion of evaluation concludes the necessary steps in developing a program budget.

3. Organization Of The Program Budgeting Function

Internal Considerations

The actual implementation of a program budget system at a particular institution will be a difficult process. A number of factors, both internal and external, will determine the success of such an effort.

Internally, the commitment of the college president, and institutions' senior administrators to the concept of program budgeting is the most crucial factor. The college president and his senior administrators must be convinced of the need for program budgeting.

External Considerations

Externally, three key agencies will have an impact on the process of establishing a program budget system within Ohio's colleges. The policies of the Ohio Board of Regents will probably be most crucial — at least in the short run. If the Regents, the Chancellor, Vice-Chancellor and two-year campuses are seriously committed to a more visable and rational process of institutional resource allocation, they will presumably follow appropriate policies to that end. It is unlikely that all the state's colleges will feel a great urgency to move in this direction unless OBR policies move them. The commitment of an institution's top leadership may well have to be externally generated.

Support

If the OBR is to expect a serious effort by the colleges, however, they will have to provide adequate support. This support can take the form of financial and personnel assistance. It is possible that as the OBR expands its staff, it may want to add budgeting personnel to assist the colleges in implementing a program budgeting system. Colleges not staffed to initiate this system may use the services of the OBR rather than hire outside consultants.

A second and more crucial support factor is the financial one. If colleges are to engage in serious program budgeting, they must have some assurance with regard to the resources they will have to allocate. Under the present system of state funding, tied to FTE students, colleges do not have this assurance. The OBR might well be advised to a system of guaranteeing each institution a certain appropriation regardless of the outcome of its enrollment projection. In other words, a floor would be provided for each college. (This need is acute for "young" colleges.) If enrollment falls below projections or continues to decline, this support could be lowered — but with enough advance warning to permit decision-makers to plan accordingly.

Rational budgeting is encouraged when there is some assurance of the resources to be allocated.

This change, however, will require support from the Legislature as well. This brings us to the second major agency influencing colleges. While the OBR can move the colleges toward program budgeting through its policies, the Legislature can mandate such a practice. Should the Legislature take this course, it is crucial, as indicated above, that it also move to establish an assured appropriation for each institution of high education. Further, the legislative leaders should be aware of the limitations of program budgeting and provide a reasonable timetable.

The governor is also a crucial factor in the future of program budgeting. His appointees to the OBR and the philosophies they reflect in their role will have an impact on the course of the Board. More immediately, the recommendations he makes to the Legislature about funding higher education and whether that funding is strictly tied to the FTE formula will affect program budgeting. Moreover, to the extent that the governor promotes better management practices throughout state government, the general state climate will encourage college administrators to take program budgeting more seriously.

The commitment of a college's top administration to program budgeting, therefore, may well be directly affected by these external considerations. As stated above, whatever its source, such a commitment is necessary. The following additional considerations are offered as aids in implementing a program budget.

The first problem to be overcome will be an attitudinal one — particularly on the part of many administrators and faculty.

Participation and Communication

In order to help overcome the attitudinal problem, it would probably be desirable to create a college task force on program budgeting. This group should be representative of the college administration as well as the faculty. A number of the faculty on this task force should be drawn from the faculty governing body. To promote acceptance, the active participation of such bodies from the earliest stages seems essential. This group might be headed by the individual who is currently in charge of program budgeting, or who will hold that position in the future.

Among the activities this group should concern itself with are:

1. Develop an implementation schedule.
2. Develop a plan for staff orientation and training.
3. Organize a plan for communication.

The implementation schedule should include the major elements of the program budgeting process. This would involve a description of the activities involved and the sequence of action, list the person responsible for the action, and state the target date for completion of the action.

Since many decision-makers in higher education — from staff members through academic vice presidents — are educated in disciplines where quantification is not commonly utilized, formal training sessions for all participants may be necessary to develop the full potential of the procedure. The development of a plan for staff training and orientation is therefore crucial. Not only must the appropriate personnel be trained, but an effective orientation program can help overcome resistance to program budgeting.

Closely related to the orientation program is the need for a communication plan. Such a plan might include:

1. Identification of groups and individuals who must be informed.
2. An overview of program budgeting.
3. Why the institutions need program budgeting.
4. References about program budgeting.
5. Current status of program budgeting in the institution.
6. Future plans.
7. Pertinent experience of other colleges.

Once the college task force is operative, it would be desirable to create division and department committees to develop and integrate their curriculum and instructional programs.

In summary, a successful program budgeting system will require a systematic consideration of several internal and external factors. The single most important factor is a commitment of the college president and his administrative staff to program budgeting.

4. Resources Required For Program Budgeting

This chapter is concerned with facets of a college's environment which are required to support a program budgeting process. Specifically described are such items as the commitment of the administration, central staff resources, information data base, resource allocation aids and techniques, and time.

Commitment of Top Administration

Program budgeting is more than a process. It is for most colleges a new way of thinking and planning, budgeting, and evaluating. It can be expensive, time-consuming, and will require a great deal more work from a lot of personnel — administrators, faculty, and even students. **Thus, to get program budgeting underway, to plan for and implement, and then actually to use it, requires a commitment to it by all personnel involved in the resource allocation process,** especially the president and other top level administrators. Without their direction and impetus, program budgeting as a fully beneficial process will not be realized. They must not only support the concept, but more importantly use the process and data derived from it to influence their resource allocation decisions and evaluations.

Such use of the program budgeting, when it obviously and openly affects the budgeting process, will cause all participants to help improve it. And on the contrary, if it becomes clear that resource allocation decisions are not based upon program budgeting, its use and usefulness will fall into disrepute.

It is recommended that the president present to the board of trustees, a formal plan to utilize a program budgeting process. This plan should include an implementation schedule. Also it should outline resource requirements in terms of personnel, dollars and time.

Central Staff Resources

Before one can speak regarding the subject of providing centralized staff support for a program budgeting process, it is best to discuss the kinds of support necessary. Following is a partial list of tasks which must be performed to implement and use fully program budgeting.

1. Design the actual detailed process, including forms, deadlines, data flows, provide for recycling, etc.
2. Educate personnel involved about the process. This involves not only introductory teaching sessions, but ongoing operational assistance to department heads, deans, etc. as they prepare their budget proposals.

3. Provide comparative data from other schools, systems, states, and agencies regarding quantitative and qualitative measures of performance. (In using comparative data it is crucial to know the source of the data).
4. Provide data on existing and past operations within the college itself.
5. Provide central projections of certain data to support the process. This especially pertains to detailed, departmental, enrollment projections by level of instruction.
6. Assist in estimating or evaluating resource requirements.
7. Assist in estimating all implications of budget proposals on a school's resources, as well as its outputs.
8. Provide for full integration of program budgeting process within the planning process.
9. Assist in evaluating proposals as well as ongoing programs.

As can be inferred from the above, many offices and people must be involved to satisfy these needs. Specifically, the registrar, personnel officer, finance office, data processing director, space data officer and systems director must be involved intimately with a sizable commitment of time and effort to the process. (In several colleges, the foregoing functions will all be accomplished by one or two people.) Furthermore, an individual (or group) from the central "academic" administration must be involved, directly in 1 and 2 above, and hopefully in all of the nine tasks mentioned.

To reiterate what was said in an earlier section, program budgeting cannot be left to implementation and use without major direction and **support**. If all of the administrative offices mentioned above are organizationally within the same structure (e.g., all report to the same vice president), and if that organizational structure is the one charged with the overall task of coordinating and directing the budgeting process, then the problem of support for the process is much more easily handled. On the other hand, if personnel providing all of the help mentioned in 1-9 above are in differing organizational lines, problems of duplication, lack of commitment, etc. are much more likely to occur.

For the above reasons, **it is recommended that the coordination and leadership for the program budgeting process rest with one individual, holding a position on at least a vice presidential level, so that he can command the attention of all offices which must provide support.** In addition, **it is recommended, assuming that all of the above offices are not situated in one line of the college, that an operating ongoing committee be formed of the major support participants so they will more fully appreciate their importance to the overall process.** This group should be chaired by the person in charge of the process, and should function in an advisory and design capacity to him.

Information Data Base

Program budgeting, relating as it does to outputs (or at least psuedo-outputs such as student credit hours, etc.), requires a significant increase in data from that which must feed a normal line item appropriation type budget request. In the academic area, resources allocated must be related directly to students taught, and public service performed, as well as supporting functions such as libraries, administration, etc. In the purely support areas, such as general administration, plant operation and maintenance,

and so forth, budgetary decisions must involve consideration of the services to be performed (as indicated by the support programs). Anyone attempting to detail all of the data **desirable** for program budgeting faces a nearly impossible task. Questions concerning real outputs, benefits, value added, specific services and measurability seem immediately to require a tremendous data bank involving everything from the ability/expectation levels of incoming students to the number of graduates admitted (with full scholarships) to "prestigious" schools.

More important, to begin the program budgeting process, is the determination of the minimum types of data needed to support the process. In this regard, the colleges in Ohio have a distinct advantage. The OBR Uniform Information System, which requires feeding raw data to the OBR, includes enough items to serve as a beginning for program budgeting. (Although it should be noted that the Uniform Information System needs to be modified to make it more useful at the college level.) Student credit hours by level and discipline, professional staff effort by program category, personnel, financial and space data are both interrelated and complete enough to provide the programmatic costs as specified earlier. Any college building upon the Uniform Information System data, is in a position to construct a program budget for any prior or current year's situation. This in turn provides a basis for projecting and/or preparing program budget plans for future years. Though the centralized provision of enrollment projections, induced course load matrices, and sample future program budgets would greatly assist the process, they are not absolutely necessary to implement it.

It is thus recommended that the program budgeting process be implemented using as a basis the Uniform Information System data. It is recognized that the program budget will be in a "rough" format until the Uniform Information System can be completely modified. However, colleges which follow this recommendation will gain valuable experience and expertise in the process. A couple of colleges in Ohio have already stated a program budgeting process.

Once the process is operational, additional and more sophisticated and complex data can be added. Certainly, the ability to centrally predict or prepare program budgets will be necessary, involving projected enrollments, simulations of the budget and its implications on student/faculty ratios, expense per student, faculty salaries, degrees produced, etc. Concurrently, the gathering of comparative data can be both centralized and decentralized to support the process.

Updating and Monitoring the Data Base

One of the most important, yet often overlooked, tasks to make program budgeting effective is that of ensuring the data used in the process is both consistently current and accurate. Recommending, for example, that the OBR Uniform Information System data be used as a basis is one thing. But ensuring the accuracy of those data, and thus their usefulness to an individual school, is quite another problem deserving the careful attention of the individual charged with supporting the program budgeting process. In almost all schools in Ohio, the Uniform Information System data will need to be thoroughly edited, and improved, in an ongoing way before it can be used in decision-making. This will require extensive time and effort on the

part of personnel charged with the responsibility of maintaining and servicing those files. This facet must be considered when designing the program budgeting process at an individual institution, and probably should be a major concern of the program budgeting designers.

Resource Allocation Aids

There are a number of resource allocation aids currently available. A rather complete listing can be found in the Planning Manual, which is a part of the overall Management Improvement Program. They involve nonquantitative (subjective) systems, general systems methods, conventional scheduling models and quantitative (mathematical statistical) techniques. Included among this last group are such items as extrapolation, correlation analysis, simulation, cost-benefit analysis, probability and systems analysis. Of particular note are four simulation type aids available today — the Resource Requirements Prediction Model (RRPM) produced by WICHE-NCHEMS, CAMPUS, a simulation system available from Systems Research Group (SRG), SEARCH, a simulation system developed by Peat, Marwick and Mitchell, and HELP/PLANTRAN, a simulation language developed by Midwest Research Associates. All appear to offer promise to schools wishing to provide simulation capabilities for program budgeting.

See Appendix 5 for a brief discussion analytical services and tools provided by WICHE/NCHEMS.

Also, the OBR Uniform Information System includes a substantial number of report programs generated for use by the OBR including a complex program resource accounting tool called Resource Analysis Procedure (RAP). If these OBR Uniform Information System programs were provided to the individual schools, considerable assistance to the program budgeting effort would accrue. In light of the above, **it is recommended that a committee of college representatives and OBR staff, in an effort directed by the OBR, undertake the following:**

1. **Modify the Uniform Information System so that an institution can use all of the Uniform Information System computer programs (including resource allocation procedures (RAP) to produce reports which fit the organizational units of the institution.**
2. **Investigate thoroughly simulation systems available and suggest statewide implementation of one or more, if considered cost-effective. In this light, the committee should also consider the possibility of using in all schools, specific systems and computer programs now in use in specific schools which are implementing a program budgeting process such as Lorain Community College.**

Time Constraints

Simply stated, **the implementation of a program budgeting process cannot be accomplished overnight, nor will a system be fully usable the first time through.** Sufficient time must be permitted for the following:

1. Design the process, forms, systems and computer programs. This includes time to study and resolve such sensitive and detailed questions as how to convert from program budget in the allocation stage to appropriation budget in the control stage, how to integrate grants

and contracts, and how to resolve the dilemma of fund sources — programs — line items conversions. (In several of the smaller schools, the computer program will not be needed because of small data bases.)

2. The process must allow time to convert the approved program budget to a line item budget for control purposes.
3. Time must be provided to educate personnel on the process. Training sessions for department heads, informal tutoring sessions and expanded time for actual preparation must be permitted. In addition, time to prepare for the training sessions must be allotted.
4. In the higher education environment today, when financial resources are not expanding, program **cuts** or **eliminations** are necessary. But because of personnel considerations, usually at least one full year's notice must be given. Thus, the program budgeting process should be designed to insure basic allocation decisions are made and communicated by September 1 of the year preceding their enactment.
5. The first implementation of the process may uncover sizable data errors, as well as other kinds of errors. Thus, a pilot year may be necessary before full confidence in the system is warranted.

In closing, it should be recognized that there is a wide range of college size, resources and maturity level within the state. Consequently, individual schools will want to implement program budgeting in stages. The stages of development will be directly influenced by individual needs coupled with available resources.

5. The Program Budget Plan

Characteristics and Major Components in a Program Budget Plan

A program budget plan as described in this manual refers specifically to the documentation which should be avialable in support of any organizational unit's approved operating budget for each of its programs. Specifically it should include for each program:

1. **General Description**
2. **Goals for the units**
3. **Measurable objectives to be satisfied**
4. **Alternative methods considered**
5. **Resources allocated and committed — personnel, space, equipment, and the department involved**
6. **Assumptions used, including number of students, income and expense, etc.**
7. **Relation to past and future years for this program**
8. **Relation to rest of colleges' plans**
9. **Evaluation criteria and timetable**

Sources of Data for Developing a Program Budget

Though program budgeting in a college environment has been thoroughly discussed, little actual implementation along the lines recommended in this manual has been accomplished. Nevertheless, help is available. The following examples are cited:

1. OBR Uniform Information System — As described in Chapter IV, this system has already produced volumes of data which are helpful to program budgeting.
2. WICHE-NCHEMS — The entire effort of this group, heavily funded by the Federal Government and foundations, has produced, and shows great promise for providing more data for schools adopting program budgeting. See Appendix 5 for a discussion of WICHE-NCHEMS.
3. OBR Models — The models used by the OBR in allocating state-wide subsidies to institutions merit close scrutiny. As noted in the Personnel Manual, the concept of allocating faculty positions based on an average number of student credit hours per faculty member for each level of student (program) stems from these models.
4. AAMC Medical Center Cost Studies — Both the methodology and data produced in doing these studies merit detailed attention by anyone designing a program budget system or desiring data to compose.

5. Individual Schools — Some institutions are currently active in considering, planning for, and implementing program budgeting or some facets of program budgeting. In particular, Cuyahoga Community College, Lorain Community College, Bowling Green State University, University of Toledo, University of Cincinnati, Ohio University, Ohio State University, and others in the State of Ohio are so involved. Although, the universities are quite different from most colleges, the principles and methodology of implementation should be of mutual interest and value.

In the final analysis the program budget plan is a product of the program budgeting system. In summary, this manual has attempted to set forth a framework in which to develop, and implement a program budgeting system. It is recognized that individual colleges will have to modify the framework in order to meet their specific needs. In order to help meet the financial constraints of the 70's it is imperative that institutions of higher education in Ohio move immediately to adopt a program budget system that will complement overall planning process of higher education.

Appendix 1

GUIDELINES FOR DEVELOPING GOALS AND OBJECTIVES

STAGE I — GOAL AND OBJECTIVE ANALYSIS

Many of the basic ideas for Stage I came from two books by Robert F. Mager, **Goal Analysis and Preparing.** and **Instructional Objectives.** It is important to note that the style of writing is from an individual's viewpoint. However, the proposed principles of writing goals and objectives apply equally to any organization.

STEP 1 Write down what you think or feel are goals and objectives. What is it that my organization unit wants to do or happen? Why does it exist? Write down as many statements as you can think of. Because this is a first step, use whatever words are comfortable, regardless of how fuzzy or vague they may be. At this stage, don't be concerned if each statement is a goal or objective. Thus, the first thing in goal and objective analysis is simply to start a brainstorming exercise.

STEP 2 Write down the indices of performance that would cause you to agree the goal or objective has been achieved without regard for duplication or fuzziness. Keep in mind that this is still a scratch paper exercise. There are three strategies that may help you complete this step of describing the achievement of the goal or objective.

1. Answer the question, "What will I accept as evidence my goal or objective has been achieved?"
2. Answer the question, "Given a set of 'outcomes', what is the basis on which we would separate them into two groups; those outcomes which had achieved our goals and those which had not?" Yes or no situations.
3. How would an individual outside our organization know if we have attained our goals and objectives? What clues would they look for?

Again! Step 2 is for getting thing down in writing — a brainstorming exercise.

STEP 3 Step 3 is a sorting stage. Sort the things you have listed in Step 2, looking for abstract statements and duplications. Once a goal or objective has been written and a list has been drafted of the things you think would convince you the goal or objective has been achieved, the list is sorted and separated into goals and objectives. Remember, goals are long-range and objectives are short-range. Write your goals on one sheet of paper and your objectives on another. Delete duplications, as well as those items that, on second thought, are unwanted. Abstractions are made precise and performances are indicated. Each individual goal and objective is then written on a separate piece of paper. The process is repeated until every item appears to be a goal statement, an objective statement, or neither.

APPENDIX 1

STEP 4 Step 4 refines the criteria or level of performance that would convince you that your objectives have been achieved and progress is being made toward attaining your goals. Write a complete statement for each goal and objective that describes the precise nature, quality, or amount of performance you will consider acceptable when evaluating the success of your stated goals and objectives. Identify the time frame. Make coherent statements to describe what you intend for each of the performances on your list. For example, you must define precisely what you mean by terms used in your goal and objective statements. For example, terms such as "regular, testing, understand," etc. must be precisely defined. Remember, your statements must describe the outcomes you must achieve to be convinced your goal or objective is satisfied. This step will facilitate your testing of the indices of performances to see if they truly reflect what you mean by the goal or objective, and thus assist you in communicating your thought.

Step 5 Test each appropriate statement to determine if it is a goal, an objective, or neither, see Figure A.

A Apply the criteria for the determination of goals to each statement that appears to be a goal

A "no" answer disqualifies the statement as a goal. Thus, each goal statement will reflect a 100% "yes" response for all the criteria questions.

B After tentative goals have been identified, apply each statement that appears to be an objective to the objective criteria, see Figure B. A "no" answer disqualifies the statement as an objective. Thus, each objective statement will reflect a 100% "yes" response for all the criteria questions.

FIGURE A

GOAL CRITERIA	STATEMENT A	STATEMENT B	OTHER
Is the expected outcome in agreement with the institution's philosophy?	YES___NO___	YES___NO___	YES___NO___
Are the outcomes compatible with the aims and missions of the institution?	YES___NO___	YES___NO___	YES___NO___
Can objectives be established for the statement?	YES___NO___	YES___NO___	YES___NO___
Does the action appear to be feasible?	YES___NO___	YES___NO___	YES___NO___
Can the expected results of the action be identified?	YES___NO___	YES___NO___	YES___NO___
Is the time frame long-term?	YES___NO___	YES___NO___	YES___NO___

STEP 6 Rewrite a list of goals and objectives— each on a separate page. Study your wording; qualify and explain specifically your intentions. The qualifications for your goal statement will, by nature, not be as precise as your objective statements. Your goal statement will probably, in many cases, be qualified by a narrative response. However, the qualification for the objective statements must be precise. For example, identify the specific method of measurement, establish the criteria, specify the time period, etc.

STEP 7 Test each goal and objective with the question, "If an individual achieved or demonstrated the specified indices of performances for each goal or objective, would we be willing to say that he has achieved the goal or objective?" When you can answer "yes" to each statement, this stage of goal and objectives analysis is completed.

FIGURE B

OBJECTIVE CRITERIA	STATEMENT A	STATEMENT B	OTHER
Does the statement relate to a goal?	YES___NO___	YES___NO___	YES___NO___
Is the end result measurable or observable?	YES___NO___	YES___NO___	YES___NO___
Can a specific target group be identified?	YES___NO___	YES___NO___	YES___NO___
Can the method of measurement be specified?	YES___NO___	YES___NO___	YES___NO___
Can the criteria for evaluation be identified?	YES___NO___	YES___NO___	YES___NO___
Can the testing conditions be identified?	YES___NO___	YES___NO___	YES___NO___
Can a short time period for achievement be specified?	YES___NO___	YES___NO___	YES___NO___

STAGE II — INCUBATION AND REVIEW PERIOD

STEP 1 Set aside what you have done in Stage 1 for a few days.

STEP 2 Review what you have completed. Delete duplications and unwanted items, add others and finally retest each goal and objective. Redraft your list.

STEP 3 Review what you have completed with your associates. **Can you communicate your goal and objective to them?** If not, revise. When this draft is completed, you are ready for Stage III.

STAGE III — THE CONTRACT STAGE

STEP 1 Sit down with your department or division head and express in writing your goals and objectives. Establish the measure of performance you will consider acceptable as an indication of attainment of your goals and objectives. Where necessary, revise.

STEP 2 Review the progress of goals and objectives with your department or division head on a regular basis throughout the budget year.

STEP 3 Have a formal review period with your department or division head at the end of the goals and objectives time frame. Did you or did you not attain your objectives and make progress toward your goals? Explain in writing.

STEP 4 Start with Stage I for the next budget period.

When foregoing Stages (I, II and III) are completed, a budgetary unit should have a workable list of goals and objectives that can be used for evaluation purposes in a program budgeting process.

Appendix 2

EXAMPLES OF OUTPUT INDICATORS

Output of a higher education enterprise can be determined in a number of different ways appropriate to the particular category of effort undertaken.

1. Instruction
   a. Full-time equivalent student enrollment by Autumn Quarter plus Summer Quarter (one-third value), by appropriate program classifications.
2. Separately budgeted research
   a. Dollar volume by projects
3. Public service
   a. Adult continuing education, by student contact hours, projects, number of enrollees, dollar expense
   b. Patient care by numbers served, dollar expense
   c. Radio and television broadcasting by program hours, dollar expense
   d. Remedial instruction by number of students assisted dollar expense
   e. Consultative services by projects, dollar expense
4. Auxiliary services
   a. Student health: number patients, dollar expense
   b. Residence and dining halls: number of students housed, number of meals served, dollar expense
   c. Student centers: students and others utilizing selected facilities and services, dollar expense
   d. Bookstores: dollar volume by classes of merchandise
   e. Recreational and convocation facilities: number of participants by events or facilities, dollar expense
   f. Student publications: dollar expense by type
   g. Student government: dollar expense by type of activity
   h Intercollegiate athletics: number of athletes by sport, attendance by sport, dollar expense by sport
5. Student Aid
   a. Scholarships: number of students aided, average amount of assistance
   b. Grants-in-aid: number of students aided, average amount of assistance
   c. Fellowships: number of students aided, average amount of assistance
   d. Employment: job requests, jobs filled, average compensation earned per week
   e. Loans: number of students aided, average amount of loan

Appendix 3

MODIFIED EXAMPLES OF A PROGRAM BUDGET AS DEVELOPED BY WICHE

(Please note that these examples are provided as a means to elicit ideas. The concepts should be modified to meet individual needs.)

APPENDIX 3

INSTRUCTIONAL PROGRAM BUDGET FORMAT (PART I)

Instructional Programs	FTE Student Enrollments		Average Annual Cost Per Student (Rounded to Nearest Dollar)		Total Direct Instructional Cost	
	Current	Projected	Current	Projected	Current	Projected
Health Programs						
Dental Assisting Tech.	143	157	$ 779	$ 772	$ 111,327	$ 121,409
Nursing, RN	186	195	1,127	1,117	209,656	217,843
Public Health Tech.	52	49	1,704	2,022	88,619	99,079
TOTAL	381	401			$ 409,602	$ 438,331
Natural Science Programs						
Agri.-Business Tech.	121	133	$1,168	$1,155	$ 141,340	$ 153,688
Food Processing Tech.	94	98	1,958	2,060	184,041	201,899
Municipal Waste Disposal Tech.	45	42	3,155	3,633	141,974	152,595
TOTAL	260	273			$ 467,355	$ 508,182
Public Service Programs						
Low Enforcement Tech.	85	93	$ 987	$ 958	$ 83,918	$ 89,066
Library Tech.	61	64	1,451	1,419	88,487	90,821
Regional Planning Tech.	17	16	2,532	2,398	43,048	38,361
TOTAL	163	173			$ 215,453	$ 218,248
Business Programs						
Accounting Tech.	180	198	$ 853	$ 850	$ 153,619	$ 168,211
Computer Programming Tech.	206	216	1,466	1,574	301,973	339,922
Executive Secretarial Tech.	124	117	1,851	2,257	229,510	264,084
TOTAL	510	531			$ 685,102	$ 772,217
TOTAL	1,314	1,378	$1,353	$1,406	$1,777,512	$1,936,978

INSTRUCTIONAL PROGRAM BUDGET FORMAT (PART II)
Instructional Department Operating Information

Summary Report

Department	DEPARTMENT CHAIRMEN Full-Time Equivalent		DEPARTMENT CHAIRMEN Total Salaries		TEACHING FACULTY Full-time Equivalent		TEACHING FACULTY Total Salaries	
	Current	Projected	Current	Projected	Current	Projected	Current	Projected
Health Programs	1.00	1 00	$20,500	$21,500	24.50	25 50	$ 340,929	$ 356,958
Natural Sci. Programs	1 00	1 00	24,000	25,000	32 50	34 00	364,369	393,725
Public Serv Programs	1.00	1 00	20,500	21,500	20.50	18.50	153,595	153,393
Business Programs	1 00	1 00	22,500	24,000	29 00	31 50	616,729	693,184
TOTAL	4 00	4.00	$87,500	$92,000	106.50	109.50	$1,475,622	$1,597,260

Department	OTHER STAFF Full-Time Equivalent		OTHER STAFF Total Salaries		OTHER COSTS		TOTALS FTE Faculty/Staff		TOTALS Costs	
	Current	Projected	Current	Projected	Current	Projected	Current	Projected	Current	Projected
Health Programs	6 00	7 25	$ 35,733	$ 46,047	$12,440	$13,826	31 50	33.75	$ 409,602	$ 438,331
Natural Sci Programs	8.00	8 50	59,629	68,847	19,357	20,610	41.50	43 50	467,355	508,182
Public Serv Programs	4.00	4 00	24,936	26,378	16,423	16,977	25 50	23.50	215,453	218,248
Business Programs	5 00	6 00	32,888	40,483	12,985	14,550	35 00	38 50	685,102	772,217
TOTAL	23 00	25 75	$153,185	$181,755	$61,205	$65,963	133.50	139 25	$1,777,512	$1,936,978

PART III

Productivity Ratios (Weighted Credit Hours*/FTE Faculty)

	Current	Projected	Increase	% Increase
Health Programs	700	708	8	.011
Natural Sci. Programs	360	361	1	.002
Public Service Programs	358	421	63	.175
Business Programs	791	759	(32)	(.040)
Total Average	555	566	11	.019

*Weighted Credit Hours = Total Credit Hours (s) taught x number student (s) in class (es)

PART III

Cost Per Credit Hour

(Total Budget/Weighted Credit Hours*)

	Current	Projected	Increase	% Increase
Health Programs	$24	$24	—	—
Natural Science Programs	40	41	+1	.025
Public Service Programs	29	28	−1	(.034)
Business Programs	30	32	+2	.06
Total Average	30.06	31.23	1.17	.038

*Weighted Credit Hours = Total Credit Hour (s) taught x number student (s) in class (es).

PART IV
Analysis of Selected Budget Items

	FTE Faculty/Staff		Total Budget		Projected Student Enrollment	
	Amount Increase	% Increase	Amount Increase	% Increase	Amount Increase	% Increase
Health Programs	2.25	.071	28,729	.07	20	.052
Natural Sci. Programs	2.0	.048	40,827	.087	13	.05
Public Service Programs	(2.0)	(.078)	2,795	.012	10	.06
Business Programs	3.5	.10	87,115	.127	21	.04
TOTAL	5.75	.043	159,466	.089	64	.048

APPENDIX 3

PART V

Instructional Department Operating Information

Other Departmental Costs by Type

Department	Equipment		Supplies		Printing		Travel		Miscellaneous	
	Current	Projected	Current	Projected	Current	Projected	Current	Projected	Current	Projected
Health Programs	$ 2,864	$ 3,164	$ 4,428	$ 4,794	$ 2,574	$ 2,933	$ 1,716	$ 1,955	$ 858	$ 980
Natural Science Programs	4,609	5,033	7,232	8,023	2,505	2,517	3,758	3,776	1,253	1,261
Public Service Programs	3,974	3,986	7,808	8,007	2,320	2,492	1,547	1,661	774	831
Business Programs	2,985	3,176	2,889	3,259	3,555	4,056	2,802	3,244	754	815
	$14,432	$15,359	$22,357	$24,083	$10,954	$11,998	$ 9,823	$10,636	$ 3,639	$ 3,887

Appendix 4

EXAMPLES OF FORMS USED TO DEVELOP A PROGRAM BUDGET FOR A COLLEGE

(Please note that these examples are provided as a means to elicit ideas. Individual or groups of institutions should select appropriate forms and modify them to meet specific needs in the budget development process. The basic ideas for the format of these examples came from a report prepared for the Board of Higher Education of the State of Illinois: **A Conceptive Framework for Statewide Higher Education Resource Planning, Programming & Budgeting** by John D. Wells, September, 1972.)

APPENDIX 4

Table 4.1

Title: TOTAL COSTS AND SOURCES OF FUNDS

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Item	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
	DOLLAR REQUIREMENTS:						
1	Operating						
2	Capital						
3	Total						
	SOURCE OF FUNDS:						
4	Income from Government						
5	State						
6	Instructional Subsidy						
7	Other, Through Regents						
8	Other State Agencies						
9	Local						
10	Federal Grants and Contracts						
11	Total Income from Government						
12	Income from Students						
13	Instructional Fees Collectible						
14	Instructional Fees Waived						
15	General (Services) Fees						
16	General (Services) Fees Waived						
17	Tuition (Out of State) Fees Collectible						
18	Tuition (out of State) Fees Waived						
19	Other Fees and Charges Collectible						
20	Other Fees and Charges Waived						
21	Total Income from Students						
22	Other Income						
23	Endowment Income						
24	Private Gifts and Grants						
25	Sales and Charges						
26	Income from Temporary Investments						
27	Other						
28	Total Other Income						
29	Total Income						

Table 4.2

Title: OPERATING COSTS BY FUNCTION

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Item	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
	DOLLAR REQUIREMENTS:						
1	Instructional Activities, Total						
2	General Academic Instruction						
3	Organized Research						
4	Public Service						
5	Academic Support						
6	Student Services						
7	Institutional Support, Total						
8	Operation and Maintenance of Physical Plant						
9	Independent Operations						
10	Total						
	SOURCE OF FUNDS:						
11	Income from Government						
12	State						
13	Instructional Subsidy						
14	Other, Through Regents						
15	Other State Agencies						
16	Local						
17	Federal Grants and Contracts						
18	Total Income from Government						
19	Income from Students						
20	Instructional Fees Collectible						
21	Instructional Fees Waived						
22	General (Services) Fees Collectible						
23	General (Services) Fees Waived						
24	Tuition (Out of State) Fees Collectible						
25	Tuition (Out of State) Fees Waived						
26	Other Fees and Charges Waived						
28	Total Income from Students						
29	Other Income						
30	Endowment Income						
31	Private Gifts and Grants						
32	Sales and Charges						
33	Income from Temporary Investments						
34	Other						
35	Total Other Income						
36	Total Income						

APPENDIX 4

Table 4.3

Title: TOTAL COSTS AND SOURCES OF FUNDS

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Item	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
	DOLLAR REQUIREMENTS:						
1	Operating						
2	Capital						
3	Total						
	SOURCE OF FUNDS:						
4	Income from Government						
5	State						
6	Instructional Subsidy						
7	Other, Through Regents						
8	Other State Agencies						
9	Local						
10	Federal Grants and Contracts						
11	Total Income from Government						
12	Income from Students						
13	Instructional Fees Collectible						
14	Instructional Fees Waived						
15	General (Services) Fees Collectible						
16	General (Services) Fees Waived						
17	Tuition (Out of State) Fees Collectible						
18	Tuition (Out of State) Fees Waived						
19	Other Fees and Charges Collectible						
20	Other Fees and Charges Waived						
21	Total Income from Students						
22	Other Income						
23	Endowment Income						
24	Private Gifts and Grants						
25	Sales and Charges						
26	Income from Temporary Investments						
27	Other						
28	Total Other Income						
29	Total Income						

Table 4.4

Title: OPERATING COSTS BY FUNCTION

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Item	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
	DOLLAR REQUIREMENTS:						
1	Instructional Activities, Total						
2	General Academic Instruction						
3	Organized Research						
4	Public Service						
5	Academic Support						
6	Student Services						
7	Institutional Support, Total						
8	Operation and Maintenance of Physical Plan						
9	Independent Operations						
10	Total						
	SOURCE OF FUNDS:						
11	Income from Government						
12	State						
13	Instructional Subsidy						
14	Other, Through Regents						
15	Other State Agencies						
16	Local						
17	Federal Grants and Contracts						
18	Total Income from Government						
19	Income from Students						
20	Instructional Fees Collectible						
21	Instructional Fees Waived						
22	General (Services) Fees Collectible						
23	General (Services) Fees Waived						
24	Tuition (Out of State) Fees Collectible						
25	Tuition (Out of State) Fees Waived						
26	Other Fees and Charges Collectible						
27	Other Fees and Charges Waived						
28	Total Income from Students						
29	Other Income						
30	Endowment Income						
31	Private Gifts and Grants						
32	Sales and Charges						
33	Income from Temporary Investments						
34	Other						
35	Total Other Income						
36	Total Income						

APPENDIX 4

Table 4.5

Title: DETAILED BREAKDOWN OF OPERATING COSTS, BY FUNCTION

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Functional Classification	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
1.	INSTRUCTIONAL ACTIVITIES, Total						
1.1	General Academic Instruction						
1.2	Occupational and Vocational						
1.3	Special Session Instruction						
1.4	Extension Instruction						
1.5	Instructional Support						
2.	ORGANIZED RESEARCH, Total						
2.1	Institutes and Research Centers						
2.2	Project Research — Funded						
2.3	Individual Research — Nonfunded						
2.4	Research Support						
3.	PUBLIC SERVICE, Total						
3.1	Community Education						
3.2	Community Support						
3.3	Cooperative Extension Service						
3.4	Public Service Support						
4.	ACADEMIC SUPPORT, Total						
4.1	Libraries						
4.2	Museums and Galleries						
4.3	Special Academic Functions						
4.4	Academic Support Not Elsewhere Classified						
5.	STUDENT SERVICES, Total						
5.1	Social and Cultural Development						
5.2	Supplementary Education						
5.3	Counseling and Career Service						
5.4	Financial Aid						
5.5	Student Services Support						
6.	INSTITUTIONAL SUPPORT, Total						
6.1	Executive Management						
6.2	Fiscal Operations						
6.3	General Administrative Services						
6.4	Logistic Services						
6.5	Faculty and Staff Services						
6.6	Community Relations						
6.7	Operation and Maintenance of Physical Plant						
6.8	Institution Support Not Elsewhere Classified						
7.	INDEPENDENT OPERATIONS, Total						
7.1	Institutional Operations						
7.2	Outside Agencies						
7.3	Independent Operations Support						
	Total						

Table 4.6

Title: OPERATING COSTS, BY OBJECT EXPENDITURE

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Object Expenditure	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
1	PERSONAL SERVICE (100)						
2	STAFF BENEFITS (200)						
3	SUPPLIES (300)						
4	TRAVEL AND ENTERTAINMENT (400)						
5	INFORMATION AND COMMUNICATIONS (500)						
6	MAINTENANCE, REPAIRS AND OTHER OCCUPANCY EXPENSES (600)						
7	MISCELLANEOUS (700)						
8	PURCHASES FOR RESALE (800)						
9	EQUIPMENT (900)						
10	TOTAL EXPENDITURES						

APPENDIX 4

Table 4.7

Title: STAFF SALARIES

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Staff Classification	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
1	ACADEMIC STAFF, Total						
2	Administrative						
3	Assistant Professors						
4	Instructors						
5	Lecturers						
6	Other						
7	NONACADEMIC STAFF, Total						
8	Civil Service, Total						
9	Officials, managers, professionals						
10	Technicians and skilled craftsmen						
11	Office and clerical						
12	Operatives, laborers, service workers						
13	Noncivil Service, Total						
14	Officials, managers, professionals						
15	Technicians and skilled craftsmen						
16	Office and clerical						
17	Operatives, laborers, service workers						
18	Total						
	Memorandum:						
19	Student employees						

Table 4.8

Title: CAPITAL COSTS BY CATEGORY

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Capital Category	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
	DOLLAR REQUIREMENTS:						
1	Building, Additions, and/or Structures						
2	Funds to Complete Bond Eligible Buildings						
3	Land						
4	Equipment						
5	Utilities						
6	Remodeling and Rehabilitation						
7	Site Improvements						
8	Planning						
9	Cooperative Improvements						
10	Total						
	SOURCES OF FUNDS:						
11	State Funds, Total						
12	General Revenue						
13	Other						
14	Tuition						
15	Federal, Total						
16	Other, Total						
17	Auxiliary Enterprises						
18	Grants and Donations						
19	Bond Funds						
20	Other						
21	Total						

APPENDIX 4

Table 4.9

Title: PROGRAMMING OF REQUESTED CAPITAL FUNDS

Capital Category _____

System: _____ Institution: _____

Campus: _____ Code: _____

Project Code	Project	Past Year (PY) Cost	Current Year A (CY) Prior to BY	Budget Year R (BY) d in BY	BY+1 BY+1	. . . . .	Target Year (TY) Year (TY)

Table 4.10

Title: CAPITAL COSTS BY FUNCTION

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Functional Classification	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
1	INSTRUCTIONAL ACTIVITIES						
2	ORGANIZED RESEARCH						
3	PUBLIC SERVICE						
4	ACADEMIC SUPPORT						
5	STUDENT SERVICES						
6	INSTITUTIONAL SUPPORT						
7	INDEPENDENT OPERATIONS						
8	Total						

APPENDIX 4

Table 4.11

Title: STAFF REQUIREMENTS (FTE)

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Staff Classification	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
1	ACADEMIC STAFF, Total						
2	Administrative						
3	Assistant Professor						
4	Instructors						
5	Lecturers						
6	Other						
7	NONACADEMIC STAFF, Total						
8	Civil Service, Total						
9	Officials, managers, professionals						
10	Technicians and skilled craftsmen						
11	Office and clerical						
12	Operatives, laborers, service workers						
13	Non-Civil Service, Total						
14	Officials, managers, professionals						
15	Technicians and skilled craftsmen						
16	Office and clerical						
17	Operatives, labors, service workers						
18	Total						
19	Memorandum: Student employees						

Table 4.12

Title: TOTAL SPACE ADDITIONS OR REDUCTIONS FROM CONSTRUCTION ACTIVITY

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Item	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
	GROSS SQUARE FEET						
1	Space Additions, Total						
2	New buildings						
3	Additions to existing buildings						
4	Remodeling or rehabilitations						
5	Space Reductions, Total						
6	Razed buildings						
7	Remodeling or rehabilitation						
8	Net Space Additions or Reductions						
	NET ASSIGNABLE SQUARE FEET						
9	Space Additions, Total						
10	New buildings						
11	Additions to existing buildings						
12	Remodeling or rehabilitations						
13	Space Reductions, Total						
14	Razed buildings						
15	Remodeling or rehabilitation						
16	Net Space Additions or Reductions						
17	Gross Square Feet in Operation						
18	Net Assignable Square Feet in Operation						

APPENDIX 4

Table 4.13

Title: CONSTRUCTION ACTIVITY NASF SPACE ADDITIONS OR REDUCTIONS BY FUNCTIONAL CLASSIFICATION

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Functional Classification	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
1	INSTRUCTIONAL ACTIVITIES						
2	ORGANIZED RESEARCH						
3	PUBLIC SERVICE						
4	ACADEMIC SUPPORT						
5	STUDENT SERVICE						
6	INSTITUTIONAL SUPPORT						
7	INDEPENDENT OPERATIONS						
8	Total						

Table 4.14

Title: LEASED NASF SPACE ADDITIONS, BY FUNCTIONAL CLASSIFICATION

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Functional Classification	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
1	INSTRUCTIONAL ACTIVITIES						
2	ORGANIZED RESEARCH						
3	PUBLIC SERVICE						
4	ACADEMIC SUPPORT						
5	STUDENT SERVICES						
6	INSTITUTIONAL SUPPORT						
7	INDEPENDENT OPERATIONS						
8	Total						

APPENDIX 4

Table 4.15

Title: RENTAL NASF SPACE ADDITIONS, BY FUNCTIONAL CLASSIFICATION

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Functional Classification	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
1	INSTRUCTIONAL ACTIVITILS						
2	ORGANIZED RESEARCH						
3	PUBLIC SERVICE						
4	ACADEMIC SUPPORT						
5	STUDENT SERVICES						
6	INSTITUTIONAL SUPPORT						
7	INDEPENDENT OPERATIONS						
8	Total						

Table 4.16

Title: CONSTRUCTION ACTIVITY NASF SPACE ADDITIONS OR REDUCTIONS, BY ROOM TYPE

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Item	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
1	100 Classroom						
2	200 Laboratory						
3	300 Office						
4	400 Study						
5	500 Special Use						
6	600 General Use						
7	700 Supporting						
8	800 Medical Care						
9	900 Residential						
10	999 Prorate						
11	000 Non-Assignable Area						
12	080 Unassigned Area						
13	Total						

APPENDIX 4

Table 4.17

Title: LEASED NASF SPACE ADDITIONS, BY ROOM TYPE

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Item	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
1	100 Classroom						
2	200 Laboratory						
3	300 Office						
4	400 Study						
5	500 Special Use						
6	600 General Use						
7	700 Supporting						
8	800 Medical Care						
9	900 Residential						
10	999 Prorate						
11	000 Non-assignable Area						
12	080 Unassigned Area						
13	Total						

Table 4.18

Title: RENTAL NASF SPACE ADDITIONS, BY ROOM TYPE

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Item	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
1	100 Classroom						
2	200 Laboratory						
3	300 Office						
4	400 Study						
5	500 Special Use						
6	600 General Use						
7	700 Supporting						
8	800 Medical Care						
9	900 Residential						
10	999 Prorate						
11	000 Non-Assignable Area						
12	080 Unassigned Area						
13	Total						

APPENDIX 4

Table 4.19

Title: CONSTRUCTION SCHEDULE OF PROPOSED NEW BUILDINGS THROUGH TARGET YEAR

System: _____ Institution: _____

Campus: _____ Code: _____

Project Code	Description of Proposed Building	GSF[a]	NASF[b]	Ratio	Date Planning Funds will be requested	Date Construction Will Begin	Date Building Will Be Available

[a]Gross Square Feet. [b]Net Assignable Square Feet.

Table 4.20

Title: CONSTRUCTION SCHEDULE FOR REMODELING AND REHABILITATION PROJECTS THROUGH TARGET YEAR

System: _____ Institution: _____

Campus: _____ Code: _____

Project Code	Description of Proposed Project	GSF[a]	NASF[b]	Ratio	Date Planning Funds will be requested	Date Construction Will Begin	Date New Space Will Be Available

APPENDIX 4

Table 4.21

Title: TOTAL DEGREES EARNED

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Item	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
1	ASSOCIATE DEGREE— Business Programs						
2	ASSOCIATE DEGREE— Health Programs						
3	ASSOCIATE DEGREE— Engineering Programs						
4	ASSOCIATE DEGREE— Natural Science Programs						
5	ASSOCIATE DEGREE— Public Service Programs						
6	OTHER						
7	Total						

Table 4.22

Title: NUMBER OF ASSOCIATE DEGREES—BUSINESS

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Programs by Category	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
1	Accounting Technology						
2	Business Management Technology						
3	General Secretarial Technology						
	•						
	•						
	•						

APPENDIX 4

Table 4.23

Title: NUMBER OF ASSOCIATE DEGREES—HEALTH

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Programs by Category	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
1	Dental Assisting Technology						
2	Nursing, R. N.						
3	Physical Therapy Technology						
	•						
	•						
	•						
	•						

Table 4.24

Title: NUMBER OF ASSOCIATE DEGREES—ENGINEERING

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Programs by Category	Past Year (PY)	Current Year (CY)	Budget Year (BY)	FY+1	. . .	Target Year (TY)
						. . .	
1	Architectural Technology						
2	Chemical Engineering Technology						
3	Drafting and Design Technology						
	•						
	•						
	•						
	•						

APPENDIX 4

Table 4.25

Title: NUMBER OF ASSOCIATE DEGREES—NATURAL SCIENCE

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Programs by Category	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
1	Agriculture Business Technology						
2	Farm Management Technology						
3	Food Preparation Technology						
	•						
	•						
	•						
	•						

Table 4.26

Title: NUMBER OF ASSOCIATE DEGREES—PUBLIC SERVICE

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Programs by Category	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
1	Law Enforcement Technology						
2	Recreational Service Technology						
3	Regional Planning Technology						
	•						
	•						
	•						
	•						

APPENDIX 4

Table 4.27

Title: STUDENT ENROLLMENTS AND CREDIT HOURS

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Item	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
	Headcount Enrollment, Total						
	Business Programs						
	Health Programs						
	Engineering Programs						
	Natural Science Programs						
	Public Service Programs						
	FTE Enrollment, Total						
	Business Programs						
	Health Programs						
	Engineering Programs						
	Natural Science Programs						
	Public Service Programs						
	Student Credit Hours, Total						
	Business Programs						
	Health Programs						
	Engineering Programs						
	Natural Science Programs						
	Public Service Programs						

Table 4.28

Title: STUDENT CREDIT HOURS, TOTAL

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Programs by Category	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	

APPENDIX 4

Table 4.29

Title: STUDENT CREDIT HOURS—BUSINESS

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Programs by Category	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	

Table 4.30

Title: STUDENT CREDIT HOURS—HEALTH

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Programs by Category	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	

APPENDIX 4

Table 4.31

Title: STUDENT CREDIT HOURS—ENGINEERING

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Programs by Category	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY + 1	. . .	Target Year (TY)
						. . .	

Table 4.32

Title: STUDENT CREDIT HOURS—NATURAL SCIENCE

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Programs by Category	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY 1	. .	Target Year (TY)
						. . .	

APPENDIX 4

Table 4.33

Title: FULLTIME EQUIVALENT INSTRUCTIONAL FACULTY ACTIVITY

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Item	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
1	Total Faculty						
3	Business Programs						
3	Health Programs						
4	Engineering Programs						
5	Natural Science Programs						
6	Public Service Programs						
7	Direct Instruction, Total						
8	Business Programs						
9	Health Programs						
10	Engineering Programs						
11	Natural Science Programs						
12	Public Service Programs						
13	Indirect Instruction, Total						
14	Business Programs						
15	Health Programs						
16	Engineering Programs						
17	Natural Science Programs						
18	Public Service Programs						
19	Departmental Research, Total						
20	Business Programs						
21	Health Programs						
22	Engineering Programs						
23	Natural Science Programs						
24	Public Service Programs						
25	Departmental Overhead, Total						
26	Business Programs						
27	Health Programs						
28	Engineering Programs						
29	Natural Science Programs						
30	Public Service Programs						

Table 4.34

Title: DISTRIBUTION OF TEACHING ACTIVITY (FTE)

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Item	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
1	Total Teaching Faculty						
2	Business Programs						
3	Health Programs						
4	Engineering Programs						
5	Natural Science Programs						
6	Public Service Programs						
7	Assistant Professors						
8	Business Programs						
9	Health Programs						
10	Engineering Programs						
11	Natural Science Programs						
12	Public Service Programs						
13	Instructors						
14	Business Programs						
15	Health Programs						
16	Engineering Programs						
17	Natural Science Programs						
18	Public Service Programs						
19	Lecturers						
20	Business Programs						
21	Health Programs						
22	Engineering Programs						
23	Natural Science Programs						
24	Public Service Programs						
25	Other						
26	Business Programs						
27	Health Programs						
28	Engineering Programs						
29	Natural Science Programs						
30	Public Service Programs						

APPENDIX 4

Table 4.35

Title: TOTAL INSTRUCTIONAL COST PER STUDENT CREDIT HOUR

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Programs by Category	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	

Table 4.36

Title: RATIOS OF STUDENT CREDIT HOURS TO FACULTY

System: _____ Institution: _____

Campus: _____ Code: _____

Line Code	Item	Past Year (PY)	Current Year (CY)	Budget Year (BY)	BY+1	. . .	Target Year (TY)
						. . .	
1	SCR per Total FTE Faculty						
2	Business Programs						
3	Health Programs						
4	Engineering Programs						
5	Natural Science Programs						
6	Public Service Programs						
7	SCR per Direct Instruction FTE Faculty						
8	Business Programs						
9	Health Programs						
10	Engineering Programs						
11	Natural Science Programs						
12	Public Service Programs						
13	FTE Enrollment per Total FTE Faculty						
14	Business Programs						
15	Health Programs						
16	Engineering Programs						
17	Natural Science Programs						
18	Public Service Programs						

Appendix 5

BRIEF DISCUSSION OF ANALYTICAL SERVICES & TOOLS PROVIDED BY NATIONAL CENTER FOR HIGHER EDUCATIONAL MANAGEMENT SYSTEMS AT WICHE

(Sources of information for this appendix are "WICHE Annual Report 1972, p.p. 14-15 and National Center for Higher Education Management Systems at WICHE Director's Annual Report 1971-72, p.p. 16-17.)

(NCHEMS—WICHE)

Under the direction of Dr. Ben Lawrence, NCHEMS has three general goals. They are (1) to improve insitutional (college, university, etc.) management, (2) to improve statewide coordination of higher education, and (3) to improve decision-making processes at the national level.

To achieve these goals, NCHEMS is designing, developing, and helping with the implementation of systems for planning and management. These systems are for use on all levels of higher education.

Twenty-seven programs comprise the NCHEMS division. And as the name implies, NCHEMS does not focus its operation only on the 13 western states; it reaches out to all 50 states. By latest count in January, some 800 institutions were participating.

The principal advisors of NCHEMS programs are the people affected by them. They include administrators, faculty, members of governing boards and coordinating councils, students, legislators and others.

The NCHEMS programming is divided into two divisions: Research and Development, and Applications and Implementation.

Here are a few examples of the many NCHEMS activities during 1972.

Study at California State University, Fullerton. NCHEMS conducted a five-month study of the comprehensive use of its management tools at a single university. It was a first. And it was a success. The study provided a number of things. The NCHEMS tools work well individually, and they also complement each other when used together. Further, the use of NCHEMS tools has the potential to enhance the university's internal planning and its preparation of external budget and resources requests. Principal tools used were the Resource Requirements Prediction Model, Student Flow Model, and Cost Finding Principles (see p.p. . .).

NCHEMS National Assembly. This was a first, too. Some 700 higher education administrators from across the country met in Denver last Fall to see first hand the NCHEMS operation explore a number of management questions. Assembly participants were particularly interested in two key issues: (1) Confidentiality versus full disclosure of information amassed by the new, computerized management systems, and (2) the problems of information exchange among higher education institutions, using the common data elements being developed by NCHEMS.

Fourth Annual National Invitational Seminar on Higher Education Management. Here, too, the topic was management. But the key to last Fall's meeting in Washington, D.C., was the

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opening of communication lines. Leaders and spokesmen for traditional higher education (colleges, universities, etc.) met, began to talk and trade ideas with leaders of the rest of postsecondary education (proprietary, vocational, military, corporate, etc.). The seminar was cosponsored by NCHEMS, American Council on Education, Education Commission of the States, State Higher Education Executive Officers, and Center for Research and Development in Higher Education, Berkeley.

Forecast of Change in Postsecondary Education. This NCHEMS panel study predicting the future of higher education received national press coverage. The six-month study used 385 panelists in a five-round survey, and they made a total of more than 100 predictions. According to the panel, among important and highly likely changes were growth of vocational programs, more attention to social problems, increase in faculty collective bargaining, close scrutiny of higher education budgets, and increased access to higher education for all.

THE FUTURE. In coming months, NCHEMS will focus special attention on higher education management at the state and national level. This does not mean that there will be any slowdown in effort on institutional programs. But broad-based programs, such as Information Exchange Procedures and Cost Finding Principles, will get more attention.

Also slated for special attention is NCHEMS's National Planning Model. This prototype model, which is still in the testing phase, will attempt to simulate the reactions of the students and institutions to various alternative federal funding policies.

CURRENT NCHEMS PROJECTS

Cost Finding Pinciples

To develop procedures for conducting cost analyses in institutions of higher education. These procedures will define the methodology for identifying, distributing, and allocating cost information to the programmatic activities of institutions of higher education.

Data Element Dictionary, Second Edition

To develop a standard set of data element terminology used by the various NCHEMS products. First edition completed.

Departmental Management Systems

To develop a set of basic tools that a departmental chairman can use in carrying out his prescribed responsibilities. Such responsibilities include allocation of resources, maximum utilization of those resources, management of personnel, writing and/or approval of research projects, projection of departmental growth, initiation of public services projects, determination of the impact of adding a new major or minor program within the department.

Facilities Inventory Classification Structure

To revise and update the Federal Higher Education Facilities Classification and Inventory Procedures Manual in accordance with experience gained from using the current manual and with recent developments in higher education planning and management.

Faculty Activity Analysis Manual

To develop a manual that provides guidelines to institutions wishing to undertake analysis of faculty activity. Included within this manual will be recommended procedures for various analytical studies and guidelines for data collection.

Faculty Activity Analysis Procedures

To develop a manual that describes a standard methodology for the categorization of faculty effort and the distribution of faculty effort to the programs in an institution of higher education (as represented by the Program Classification Structure).

*Federal Financing for Higher Education

To develop viable procedures for providing federal financial support to students, institutions, and/or states that are consistent with the needs of higher education, promote the goals of higher education, and provide consistent and productive incentives for higher education.

* Project completed

Future Planning and Management Systems

To ensure that concepts, tools, and procedures will be available to assist higher education decision makers in the future. It will develop a basis for future planning and management systems in higher education and attempt to ensure that management tools and techniques will be relevant to the changing structures, responsibilities, and trends in higher education.

Glossary

To produce a document that summarizes the definitions of the derived data elements (i.e., those data elements arrived at through combination or manipulation of the basic data elements) and other basic terminology used by the various NCHEMS products.

HEGIS VIII

To assist the National Center for Educational Statistics (NCES) in determining user requirements for educational statistics. This purpose is to be achieved through the mecnanism of a conference

Higher Education Finance Manual

To determine the financial data concerning higher education necessary for planning, budgeting, and reporting and to design recommended procedures for collecting and arraying such data for the Higher Education General Information Survey (HEGIS).

Information Exchange Procedures

To define the conventions by which data are to be aggregated and arrayed for exchange among those institutions and agencies desiring to exchange such data as an NCHEMS participant.

***Manpower Accounting Manual**

To provide a comprehensive and systematic set of categories whereby an institution's assignments of manpower, including the faculty, may be identified with occupational activities and institutional functions.

***National Foundation for Postsecondary Education**

To do a planning and management analysis of the proposed National Foundation of Postsecondary Education. This analysis is to serve as background for the planning group and director of the National Foundation.

National Planning Model—Phase II

To develop a national model to assess the impact of federal programs in attaining national goals and to evaluate alternative national strategies. Research efforts will focus on analysis and documentation of the prime student demand factors, institutional decision variables, and their relationships to federal programs.

Overcomes Planning

To develop measures (indicators or proxy measures) of the outcomes of higher education and to incorporate these measures in higher education and to incorporate these measures in higher education planning in such a way as to make them operational useful.

Program Budget Estimator (PROBE)

To develop an activity-based, department-oriented simulation model to aid in the application of program budgeting to higher education.

Program Budgeting Manual

To develop generalized procedures and guidelines for establishing a program budgeting system within an institution of higher education.

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***Program Classification Structure**

To develop a program structure that will provide a standard means of identifying, organizing, and describing the activities of higher education. The PCS is intended to provide a mechanism that will facilitate the organization of data for planning and analysis.

Program Measures

To identify and describe the quantitative indicators that will serve to measure the resources and activities associated with the program elements as defined by the Program Classification Structure.

Resource Requirements Prediction Model

To develop and validate a set of generalized computer routines (a model) designed to aid institutional managers in rapidly determining the future resource implications of alternative policy and planning decisions.

Resource Utilization Analysis

To develop techniques that will aid institutions in more effectively utilizing the resources available to them.

***Space Analysis Manual**

To compile a series of (institutional level) methods for evaluating the current capacity of building facilities, managing the use of space, and projecting building space requirements.

Statewide Data Elements

To identify and define explicitly those data elements that are required for statewide planning purposes. This activity will supplement the activities of the Second Edition Data Elements Dictionary Project by developing a publication (section) dealing exclusively with state-related data elements.

Statewide Higher Education Resource Prediction Model

To develop a computer simulation model that will facilitate estimating resource requirements for higher education on a statewide basis.

Statewide Planning

To conceptualize the problems of state level planners and decision makers from the perspective of modern management principles. As the conceptualization evolves, attention will shift to determining the need for a feasibility of specific activities and tools for planning and management at the state level.

Statewide Program Structure

To develop a program structure designed to serve as the basis for data collection and analysis required to support higher education planning and management at the state level. This structure will also serve as the framework for the development of generalized analytical models designed specifically for use at the state level.

Statewide Student Flow Model II-A

To extend the outcomes of the initial, institutional based, Student Flow Model Project (SFM I-A) to the problem of student movements between institutions.

Student Flow Analysis

To develop and publish a manual describing various procedures and statistical techniques that may be applied to the problems of analyzing student flow patterns and the projection of student preferences.

Student Flow Model I-A

To develop a computer-based simulation model that utilizes the institution's historical experience of student flow (i.e., structural characteristics) to estimate future enrollment patterns categorized by student levels and field of study (major).

Student Flow Model Research

To develop analytical models that will aid in predicting student enrollments and in describing student progression through postsecondary education.

Training and Implementation

To promote the adoption and implementation of NCHEMS Management tools and techniques in institutions and agencies throughout the higher education community

Visiting Professionals Training Program

To provide the opportunity for institutional or agency representatives to obtain a full understanding and working knowledge of NCHEMS developmental work.

Appendix 6

BUDGET PREPARATION MODELS

It is important to note that all of the following budget preparation models can be used with any budget process, including program budgeting. The most appropriate model depends upon the situation. However, in any budget situation and at every university, it is imperative that a systematic budgeting process be underaken.

1. **Incremental Budgeting**

   Traditionally, budgets have been developed almost solely on an incremential/line item basis.

   This model assumes the continuation of present programs and proposes incremental changes. The increases (and possibly decreases) become the focus of analysis. The advantages and disadvantages of incremental budgeting may be listed as follows:

   Advantages:

   a. Easy to understand. Widely accepted by boards of trustees, legislatures and other bodies.
   b. Have to start somewhere in analysis. There is much to be said for focusing on increases. Can devote much time on a very important part of the budget.
   c. Easy to prepare budget.

   Disadvantages:

   a. Incremental budgeting has a "bad" connotation.
   b. Not forced to justify old programs. Irrelevant programs are not eliminated.
   c. Very much politically oriented.
   d. Not practical in periods of declining income.

2. **Open-ended budgeting.**

   In this model, cost centers submit budget requests at what ever level the unit thinks appropriate. The central budget office or senior administrative officers adjust the budget to meet the required limitations of resources. This is usually done in negotiation sessions.

   The advantages and disadvantages of open-ended budgeting appear to be as follows:

Advantages:

   a. Feeling of freedom. People can express what they want.
   b. Easy to prepare budget documents.

   Disadvantages:

   a. Administrators developing departmental budgets are not faced with hard decisions.
   b. Budget requests are almost always incompatible with resources.
   c. Difficult to produce information needed for comparative evaluation of programs.
   d. Decisions are often made on a political basis.
   e. Generally takes two or three "budget rounds" to get the request in line with available resources.
   f. Raise expectations to high.

3. **Zero-base budgeting.**

   The central concept of this model is complete and simultaneous evaluation of all programs. A zero-lose budget is closely related to an open-ended budget. The

difference is primarily semantics, in that an open-ended budget is primarily associated with a traditional line item budget. Whereas, a zero-based budget is associated with program planning and budgeting. The apparent advantages and disadvantages of zero-lose budgeting are:

Advantages:

a. Politically sound.
b. Theoretically insures complete justification of programs.
c. Is commonly associated in the literature as a vital characteristic of program budgeting. (Note that this is not true for the MIP Budgeting Manual).
d. Enables an administrator to describe all the programs he would like.

Disadvantages:

a. Workload is tremendous—requires volumes of paper, and lots of time.
b. In actual practice little attention is focused on all the programs. Analysis is focused on increases.
c. Doubtful that zero-based budgeting is practically possible.

4. **Quota Budgeting.**

In this model cost centers are given a control figure and then requests to develop a budget based on this allotment. Control figures may be based on a dollar increase or decrease, percentage increase or decrease, last year's budget etc. The control figures are generally arrived at by the Finance Office and communicated through the Office of the President. Some of the advantages and disadvantages to consider in quota budgeting are as follows:

Advantages:

a. Cost centers can determine the total budget at an early date.
b. Administrators generally have flexibility to make decisions within control totals.
c. Elimination of unrealistic budget requests.
d. Entire university community is aware of the overall budget picture as reflected by quota figures.
e. Mitigates the affects of policies.
f. Budget can generally be prepared with "one round."
g. Process is well controlled.
h. Minimizes the amount of paper work.

Disadvantages:

a. Tendency to base the new budget almost entirely on the old one.
b. Central administrators must decide what support level will be allowed for various cost centers. Sometimes this decision is made on an opinion basis.
c. Associated with formula budgeting. ("The rich get richer.")
d. Quotas are generally placed on line items and not programs.

5. **Alternative level budgeting.**

This model requires that several alternative budget levels (generally two or three) be prepared. The budget levels are generally designated by the administration. (For example, 10% below present budget level, 5% more than present budget level, 15% more than present budget level.)

Advantages:

a. Good method of obtaining extensive program evaluation and clarification of program priorities.
b. Provides fuller information for central budgetary planners.
c. Offers alternatives for decision makers.
d. Makes use of the judgment of personnel at the operating levels.
e. Forces administrators to be cognizant of program priorities.

Disadvantages:

a. May be unrealistic if it is known that income is to be down.
b. Analysis will generally concentrate on the most likely level.
c. Much work is involved in preparing various levels.
d. Central planning agency must set budget levels.
e. Preliminary hypotheses about the marginal utility of programs must be etab lished.
f. Much uncertainty as to what level might be funded.

g. Hurts morale in that the person preparing a budget knows that as a general rule only one level will be examined and the other levels will represent wanted time.

6. **Expenditure Classification Model.**

This model combines features of several budget models. First, last year's budget is the starting point. Second, the organizational unit is "forced" to eliminate X% of Y dollars of old programs. Third, specific categories of "fixed", "semi-fixed" and "variable" increases and decreases are classified and defined for budget purposes. Fourth, new budget items are identified and fifth, items that are to be transferred to another program are identified.

a. **Decrease of low priority programs.** Show how you would eliminate X% of last year's budget.

b. **"Fixed" Increase or decrease.** Something a department has no control over. "Fixed" must be defined by a central office. Examples might be: mandatory Civil Service increases, retirement contributions (SPERS. PERS).

c. **"Semi-Fixed" Increase or Decrease.** Something a depar ment has little control over. Examples might be, an inflation factor, wage and price rollbacks, Civil Service step increase.

d. **"Variable" increase or decrease.** An expenditure that a department head has control over. Again, the term "variable" must be identified and agreed upon prior to budget preparation. Examples of variable increase or decrease might be: cutback of personnel, new positions for current programs, supply increases, equipment decreases, etc.

e. **New budget items or an item no longer budgeted.** For example, fees waived, insurance workmen's compensation, capital improvements, etc.
This category provides for a reasonable method to designate a new budget item, without being defensive of the budget increase.

f. **Transfer of current budgeting responsibility.** This is designated as an ongoing program that is being budgeted in a new organizational area. For example, a program might be transferred to an academic department from a non-academic area of the transfer might be inter-university. Again, this category from one department to another should allow for a smooth transfer of budget responsibility without being defensive.

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Glossary

COMPREHENSIVE GLOSSARY OF BUDGETING TERMS USED IN HIGHER EDUCATION

A-21 Rate — The overhead rate determined by principles defined in the Office of Management and Budget Circular No. A-21.

Academic Support Program — A support program consisting of those program elements that directly assist the academic functions of the institution.

Accrual Basis — The basis of accounting and reporting under which revenue are reported when they become due, even though they are received in a subsequent fiscal period; similarly, expenditures for the cost of all materials received and services rendered to an institution are reported although payments for them may not yet have been made as of the date of the financial report. The accrual basis is contrasted with the cash basis in which items are reported as revenues and expenditures only when cash is received or made available to an institution, and when t is disbursed. The terms "revenues" and "expenditures" are used in the accrual basis of accounting and reporting, and the terms "receipts" and "disbursements" in the cash basis.

Activity — A phase of work within a program that may or may not follow the organizational pattern of an agency.

Activity Crossover — A process whereby the activities supported by the expenditures recorded in a fund accounting system are matched with the same activities associated with a program classification structure.

Agency or Department — One of the departments, offices or institutions in the State of Ohio government. An independent organizational entity in state government.

Agency Funds — The funds that have been received by the institution to be held and disbursed on the instructions and behalf of the person or organization from whom they were received.

Aims — Descriptive statements of that which is to be achieved in programs. They are generally broad statements and not always quantifiable.

Allocation of Resources — The process of assigning personnel, materials, equipment and spa to specific programs.

Allocation Parameter — Institutional statistical data which serve as a proxy measure for actual resource utilization.

Allotment — An authorization to spend or obligate a fixed sum of money during a specified period of time or for a specific purpose. It is established by the Department of Finance under a delegation of power authorized in an appropriation act.

GLOSSARY

Allotment Unit — Any organizational unit of state government to which an allotment is made. Because of the different organizational patterns between departments or other agencies, an allotment unit may represent a complete department, a division, an institution or one or more functional groupings identified as a program or activity

Alternatives — Presenting a choice of plans.

Amortization — Reducing a debt through stated, periodic payments of principal and interest. Thus, an educational institution what has borrowed money and issued bonds has a plan for the amortization of the debt.

Annuity Funds — The funds acquired by the institution under plans by which it obligates itself to distribute fixed annuities, based on the value of the gifts, to the donors of the gifts during their lifetimes, and possibly to one or more survivors during their lifetimes.

Appropriated Current General Fund — The portion of current general funds that has been set aside for special operating purposes as a result of specific designations by the institution's Administration or Governing Board.

Appropriation (1) — A sum of money authorized by the state Legislature to the institution.

Appropriation (2) — A fixed amount of spending authority granted by the Legislature to an appropriation unit, describing the maximum amount of money available for a sepcified purpose, and period of time conditioned upon the availability of supporting revenues.

Appropriation Account — An accounting record established to record an appropriation item and the commitment and expenditure of an amount of appropriation

Appropriation Item — A single appropriation, usually within an appropriation unit. There are five classes of appropriation items in the general appropriations bills. These are Operating Expenses, Special Purposes, Subsidy, Rotary and Capital Improvements. Each capital improvements project in the capital improvements bill is an appropriation item.

Appropriation Unit — An organization unit or a particular function or activity for the support of which an appropriation, or series of appropriation items, is made.

Assignment Square Feet — The sum of all areas on all floors of a building assigned to, or available for assignment to, an occupant, including every type of space functionally usable by an occupant (excepting custodial, circulation, and mechanical areas).

Audit — The examination of documents, records, reports, system of internal control, accounting procedures and other information to determine the propriety, legality and mathematical accuracy of transactions; to ascertain whether all transactions have been recorded; and to determine whether transactions are accurately reflected in the accounts and in the financial statements drawn from them in accordance with generally accepted accounting principles.

Auxiliary Enterprises — An entity, that exists to furnish a service to students, faculty, or staff, and which charges a fee that is directly related to, although not necessarily equal to, the cost of the service. The general public may incidentally be served in some auxiliary enterprises. Examples are: residence halls, food services, student stores, athletics, parking lots and garages.

Average Cost — The total cost attributed to a cost center divided by the total number of units of output produced by that cost center. Also referred to as unit cost.

Balance of Funds — A statement showing the financial position of an institution at a given time, disclosing assets, liabilities and fund balances. In college and university accounting, the balance sheet should set forth the assets, liabilities and fund balances of each fund group in balanced sections.

Benefits — Useful or lucrative returns which accrue to an individual, group or society.

Biennium — A period of two fiscal years. For example, Biennium 1972-73 is for fiscal year 1971-72 and fiscal year 1972-73.

Bond — An instrument of indebtedness.

Bonds — General Obligation — Bonds sold by the state, only after approval by a vote of the people. Such bonds are debts of the State.

Bonds — Revenue — Bonds sold by the state to be retired from a specific source of revenue. Such bonds are not debts of the state.

Budget — A statement of proposed expenditures for a fixed period or for a specific project, or program, and the proposed means of financing the expenditures.

Buildings — A component of an institution's assets which refers to facilities permanently affixed to land and the remodeling of such facilities, including the associated heating systems, electrical systems, fixed equipment, sewers, sidewalks and driveways, within five feet of the building.

Campus Plan for Physical Development — One of the three major components of the Institutional Plan. A document which outlines the land and educational facilities necessary for the educational program.

One part of the Campus Plan for Physical Development is devoted to overall planning considerations, such as goals and objectives, land use, location of buildings, circulation patterns of vehicular traffic, etc. A second part of the document is subdivided by a plan for:

a. New land and buildings
b. Land-building modifications and renovations

All the physical needs for the Campus Master Plan are ranked in order of priority with an appropriate timetable. These priorities and timetables often change because of funding limitations.

Capital Cost — The valuation placed upon the services provided by land, buildings and equipment owned and utilized by an institution during any time period.

Capital Improvement — Any public improvement costing $25,000 or more per project, specifically the purchase of lands and buildings, or the construction, reconstruction, rehabilitation or conversion of buildings or other structure including permanent fixtures and original equipment and furnishings.

GLOSSARY

Capital Plan Capital Appropriations and Expenditures Budget

A plan of [illegible]come and expenses will be acquired and utilized for the Campus Plan for Ph[illegible]ent. This Capital Budget is generally based on a long-term Campus Plan for Phy[illegible]elopment and is a plan to use capital funds for top priority projects. The Capital Budget is generally prepared for a two-year period and a six-year period. Funding from the state is generally known for the two-year capital budget, but not for the six-year plan.
The Current Operating Budget and the Capital Budget should be jointly considered for approval because of their effect on each other.

Carry-over

To hold over a cost center's (e.g., department) budget balance or deficits to a subsequent budget period.

Cash Basis

The basis of accounting, in contrast with the accrual basis under which revenues are accounted for only when received in cash, and expenditures are accounted for only when paid.

Continuing vs. One-Time Needs

Continuing needs are of a recurring nature such as personnel, space and equ[illegible]nent over a long period of time. One-time needs are of non-recurring nature such as a special study, or grant.

Continuing vs. One-time Resources

Continuing resources are of a recurring nature such as student fees. One-time resources are non-recurring nature such as a special purpose grant.

Contract Encumbrance Record

An accounting form used primarily for the encumbrance of appropriations in the purchase or rental of land or buildings and for contract services involved with capital improvements and purchased personal service.

Contact Hours

The actual time of student and teacher in class, lab, or other organized activity.

Contractual Commitment

An obligation in the form of an order, signed contract or similar item which will become payable when the goods are delivered or the services rendered.

Costs

Resource utilization expressed in dollars and cents.

Cost Accounting

An expanded and ongoing phase of the general or financial accounting system that provides management promptly with unit cos[illegible]formation which can be used to interpret expenditures incurred in the operation of the business.

Cost Aggregation Structure

A specific aggregation of the activities within the programs identified in the Program Classification Structure to a level which results in costs centers containing relatively homogeneous activities.

Cost Analysis

The determination of unit costs for programs, activities, processes, etc. It takes into consideration the resources directly and indirectly used in the program being analyzed. "Unit costs" implies the use of an output indicator to which costs can be related; e.g., weighted student credit hours, student contact hours, FTE, degrees awarded, cost per square foot, etc.

Cost Category

A class of expenses representing a type of resource utilized. The major categories of cost for Cost Finding Principles are salaries and wages, supplies and expense, and capital assets.

Cost Center (1) A unit, group, or subdivision of an organization or process used to segregate and distribute income and expenditures to support a principal purpose.

Cost Center (2) The basic unit in the cost aggregation structure. For cost finding purposes, the cost centers are program elements (or aggregations thereof) identified in the Program Classification Structure to which costs can be assigned. Cost centers may be at the sub-program, program category, program sub-category, program sector level of the PCS.

Cost — Direct Direct costs are those that can be identified specifically with a particular cost objective. These costs may be charged directly to the grant contract or program.

Cost Finding An analytical process periodically used in lieu of a formal cost-accounting data as well as other data available within the institution in order to arrive at unit cost information for all activities conducted by the institution.

Cost — Indirect Indirect costs are those incurred for a common or joint purpose benefiting more than one cost objective and not readily assignable to the objective specifically benefited. Examples of this would be purchasing, accounting, etc.

Credit A reduction in the amount of an obligation usually evidenced by a purchase order alteration or credit encumbrance or by a credit memo which is offset against the payment of a current or future obligation.

Cross-Allocation A method of apportioning costs among programs which places no restrictions on the interactions between any two programs in the production process. The distinct line between primary and support programs is blurred because any program may support another and at the same time produce output for final demand. Also referred to as simultaneous allocation.

Crossover See Activity Crossover.

Crosswalk The procedure by which the costs for objects or expenditures are distributed to programs.

Current When used in connection with funds, the operating funds as distinguished from other funds; when used in connection with budgets, the present fiscal period as contrasted with past or future periods.

Current Auxiliary Enterprises Funds The assets and liabilities resulting from, and the funds available for the operation of the institution's auxiliary enterprises.

Current Expenditures Expenditures made from current funds.

Current Funds The funds which are available for current operations of the institution.

Current Funds Expenditures Expenditures for current operations made from current funds.

Current Funds Revenues All receipts and accruals of unrestricted current funds and of restricted and designated current funds expended during the current fiscal period.

GLOSSARY

Current General Funds — Unrestricted funds which are available for any current operations as distinguished from current restricted funds and current auxiliary enterprises funds which are available only for certain purposes. The classification includes the appropriated current general funds which have been set aside for special operating purposes.

Current Income — The unrestricted appropriations, fees, gifts, investment earnings, etc., accrued by the current general fund, plus an amount equal to the portion of current restricted funds expended during the period.

Current Operating Budget — A plan of how current income and expenses will be acquired and utilized to support the Educational Plan. The Current Operating Budget is generally for a one or two-year period and is detailed in nature.

Current Operating Expenses — See Operating Expenses.

Current Restricted Funds — The funds available for current operations only in compliance with the restrictions specified by the contributor or grantor.

Data Base — A collection of discrete items of information, called data elements, which describe specific systems components; e.g., the data elements which describe students, faculty, the planning process, the budget, etc.

Data bases have certain characteristics which must be continuously evaluated to determine their quality; e.g.,

1. Completeness — Is data available to support the auditing, control and decision-making functions?
2. Flexibility — Can data elements be easily added or purged from the files?
3. Accuracy — Is the data in the files edited and verified on a regular basis to assure accuracy?
4. Timelines — Are procedures for maintaining the data bases adequate to assure the user that data is current?
5. Accessibility — Can information be easily extracted from the data bases when it is needed?
6. Compatibility — Can data elements from different bases (files) be pulled together for reporting purposes? Is there an interface or linkage between all files composing the data bases?

A data base may be manually prepared, computer generated or a combination of both methods.

Debit Voucher — A cash expenditure voucher which simultaneously records an obligation and liquidates it. An authorization of expenditure where no prior encumbrance was recorded. Direct agency purchase, sometimes called local purchase, not on term contract, and under $100.00.

Debt Service — All payments in connection with funds borrowed by an institution; for example: principal payments, interest charges, payments to sinking funds to ensure principal and interest payments, payments to reserves to ensure proper upkeep and maintenance of the facilities, trustees' service charges, legal expenses and other items related to indebtedness.

Designated Funds — Funds designated by the institution's administration or governing board for specific current purposes as contrasted with those funds restricted by donors or sponsoring agencies.

Departmental Instruction — All direct expenditures incurred for instructional programs for students pursuing regular courses of study which lead generally to a collegiate degree wherever or whenever offered.

Departmental Research Expenditures — Expenditures for research accomplished as a part of regular instructional services and budgeted as instruction and departmental research rather than separately as research. The term excludes sponsored research and other separately budgeted research.

Departmental Sales and Charges — The incidental income of educational departments resulting from services performed, sales of publications and similar activities.

Depreciation — The process of apportioning the cost or other basic value of an asset, less salvage value (if any), over the estimated useful life of the asset in a systematic and rational manner.

Direct Allocation — A method for apportioning the costs of support programs to primary programs based on the premise that all support program activities contribute directly and exclusively to the primary programs. The costs associated with support programs are not allocated to other support programs as an intermediary step in the direct allocation process.

Disbursements — Payments in cash. In institutional accounting it refers primarily to deductions from the balances of the funds and all fund groups except the Current Funds group where the term expenditures is used.

Distribution — The process of attributing cost categories to a given activity in a manner which measures resources utilized by that activity. Within the cost finding process, all costs are distributed to cost centers prior to the allocation of support costs.

Division — One or more functionally or organizationally related units which are grouped within a specific agency or department for the purpose of exercising administrative control or collective costs.

Donor Cost Center — A cost aggregation point from which the related costs are apportioned to recipient cost centers through the use of an allocation technique and allocation parameters.

Educational Plan — One of three major components of the Institutional Plan. The Educational Plan is based upon the purposes of the institution and sets forth a documented plan in each of the following areas: instructional, enrollment, research, financial aids, public service, educational support plan, auxiliary services, and faculty and staff.

Educational Plant — Buildings and equipment used primarily for instructional research and administrative purposes, and for supporting service operations. The terms includes classroom buildings, laboratories, lecture halls, libraries, administration buildings, conference centers, gymnasiums, field houses, armories, recreation fields, heating and power plants, warehouses, shops, garages, laboratory apparatus and equipment, office machines, motor vehicles and machinery of the physical plant department, library books and livestock.

Effectiveness — The degree to which an objective is achieved.

Emergency Purchase — A purchase effected without a "formal" invitation to bid made with "prior" or "after the fact," approval by the Division of Purchases.

GLOSSARY

Encumbrance — A reservation of appropriations made to cover a future expenditure. Posted to the records of the Department of Finance and the Auditor of State as a mechanism for certifying the availability of sufficient uncommitted appropriations before the establishment of an obligation by a state department. (See Section 131.17, Ohio Revised code)

Encumbrances — Obligations incurred in the form of orders, contracts, and similar items will become payable when goods are delivered or services rendered. This term is synonymous with commitments.

Endowment Funds — Funds which are to be invested with only the investment income available for operating or other expenses.

Endowment Income — Income from Endowment Funds or Funds Functioning as Endowments.

Equipment — A component of an institution's assets which includes movable items having a useful life of more than one year and a cost above an institutionally defined minimum.

Evaluation — A systematic process for determining or estimating the effectiveness of a particular program or program component. Evaluation of programs is based on a comparison of actual results with planned results or objectives.

Expenditures — The cost of goods delivered or services rendered, whether actually paid or unpaid, for the operation of an institution and for additions to its plant.

Expenses — Charges incurred, whether paid or unpaid, for operation, maintenance, interest and other charges for operating purposes during the current fiscal period.

Extension and Public Services — Educational and other activities designed primarily to serve the general public as contrasted with enrolled students. Examples are correspondence courses, institutes, workshops, demonstrations, package libraries, radio and television stations, statewide surveys, agricuiture and home economics extension programs.

Faculty — The persons employed by an institution who have all or some portion of their appointment classified as instructional assignment using the guidelines set forth in the **Manual for Manpower Accounting in Higher Education**.

Faculty Activity Analysis — A process by which the activities of faculty are analyzed in order to determine contributions to institutional programs. As used by Cost Finding Principles, a method for distributing salaries and wages of the instructional staff to cost centers based on the **actual** tasks performed by a faculty member in fulfillment of his contractional obligation.

Faculty Assignment Analysis — A process by which the assignments of faculty are analyzed in order to determine expected contributions to institutional programs. As used by Cost Finding principles, a method for distributing salaries and wages of the instructional staff to cost centers based on the **expected** tasks to be performed by a faculty member in fulfillment of his contractual obligation.

Faculty Contact Hour — One hour (or period) spent by one faculty member in contact with a scheduled classroom course or section. Also known as a weekly faculty contact hour.

Factors of Production — The resources utilized by an institution in achieving its stated objectives including faculty and supporting staff, supplies and expense and capital assets.

Federal Grant — Receipts from the federal government which are deposited in noncommercial rotary funds and other operating funds.

Financial Plan — One of the three major components of the Institutional Plan. The Financial Plan is a document which outlines how financial resources will be attained and utilized to fulfill the objectives of the Educational Plan and the Capital Plan.

Fiscal Year — A twelve-month period that is not based on a calendar year. For example, a fiscal year often starts on July 1 and terminates on June 30 of the following year. Some colleges have a fiscal year of Sept. 1 to Aug. 31. Fiscal years are always referred to by the calendar year in which the fiscal year ends. For example, 1972-73 is referred to Fiscal Year (FY) '73.

Fixed Charges — Known, generally stable, recurring expenditures such as rent, insurance premiums and contributions to employee retirements.

Forecasting — To calculate or predict some future event or condition, e.g., anticipated income and expenditures, as a result of rational study and analysis of available pertinent data.

Formula Budgeting — Estimating future budgetary requirements through manipulation of quantitative data about programs and relationships between programs and costs.

Full/Complete Payment (of an Encumbrance) — An expenditure that retires a previous encumbrance in full, or, even if in an amount less than the original encumbrance, represents the last payment which will be forthcoming. Code vouchers accordingly.

Full Costing — The process by which all of the resources utilized by an institution in producing an output are identified and associated with that output.

Full-Time Equivalent — The equivalent of one person who is deemed to be carrying a full load or having a full-time appointment in terms of institutionally agreed upon conventions for converting numbers of specific individuals (students or employees) to equivalent number of full-time people.

Functional Classification — The grouping of expenditure items according to the purpose for which costs are incurred. These include: instruction and departmental research, organized activities related to educational departments, sponsored research, other separately budgeted research, other sponsored programs, extension and public services, libraries, student services, operation and maintenance of the physical plant, general administration, staff benefits and general institutional expenses.

Fund — An accounting entity established to record assets designated for a specific purpose, and transactions affecting such assets.

Fund Account Number — A numeric code established to identify a fund account.

GLOSSARY

Fund Accounting — A method of recording assets, liabilities, revenues and expenditures in distinct accounting entities which are established for the purpose of carrying on specific acitivities or attaining certain objectives in accordance with special regulations, restrictions, or limitations; also referred to as institutional or governmental accounting.

Fund Balance (Principal of Funds) — An amount equivalent to the excess of assets over liabilities of a fund, and therefore available for the fund's specific purpose.

Fund Group — A group of funds of similar character, such as current funds, loan funds, endowment funds and funds functioning as endowment, annuity and life income funds, plant funds and agency funds.

Fund Operations Account — A discrete account for each special fund in which is accumulated the opening fund balance and all transactions during the period. The balance in this account is thus always equal to the remaining fund balance.

Funds Invested in the Irreducible Debt of the State of Ohio — Funds which have been donated to the institution and which have been deposited with the State Treasury so that only the income is available for operating or other purposes.

Funds Functioning as Endowment — Funds established to account for assets designated by the Administration or Governing Board to be invested in income-producing assets and administered as if they were endowments. (See Quasi Endowments)

Funds Held in Trust by Others — The funds held and administered by a judiciary with only the income available to the institution.

General Fee — Mandatory activity fees charged to students for various organizations. General Fees are differentiated from tuition which is used for the Instructional Program.

General Administration Expenditures — Expenditures of the general executive and administrative offices concerned with the administration of the institution as a whole as contrasted with organizational units such as schools, colleges, instructional departments and the library. Examples are: the governing board, president, vice-presidents, dean faculties, business officer ane legal counsel.

General Institutional Expenses — Expenses of offices and activities which apply to the institution as a whole except for general administration and student services. Examples are: alumni office, external audit, catalogues, commencement, interest on loans for current operations and fees for institutional memberships in organizations.

General Revenue — The statutory account within the state treasury which receives revenue not assigned for a specific purpose. General Revenue Fund can be used to support any governmental operation.

Goals — The desired end results for a program. Goals are generally set for long periods of time (e.g., ten years). Goals and objectives are often used interchangeably; however, they differ in terms of their time frame, measurability, and sequence. Goals are long-term and the end result; objectives are short-range and are steps in the direction of attaining a goal.

Governmental Appropriations — All appropriations made by the state, city, or the federal government. If any appropriations are earmarked for research or public service, they will be shown under the appropriate category.

Governmental Grants or Contracts — Amounts received from any governmental unit either as grants or for the performance of a specific contract. These amounts may be for training, research, public service, or student aid and will be shown in the appropriate section.

Gross Square Feet — The sum of the floor areas included within the outside faces of exterior walls for all stories of areas, which have floor surfaces.

HEGIS Taxonomy — A classification of instructional discipline and academic subdivisions of knowledge and training as published by the National Center for Educational Statistics.

High-Order Cost Center — One that receives a greater amount of services from other cost centers while providing relatively fewer services. High-low priority ranking of cost centers is employed in the recursive allocation technique.

House Bill Number — The consecutive number assigned to each proposed act which is introduced in either house of the Legislature. The number by which appropriation acts are identified.

Implicit Cost — A generic term used in economics to denote an estimated value when no cash payment is made that would establish an absolute value.

Income — Restricted to net income, or revenues less expenses, of an operating unit within an institution, e.g., the student store, parking garage and other auxiliary enterprises. The term also refers to the earnings on investments, e.g., income on investments.

Incremental Budgeting — Developing budgets by adding incremental dollars to the last base period (generally last year's budget).

Incremental Cost — The change in total costs which results from giving from one level of output to another.

Independent Audit — An audit performed by an independent auditor, in contrast to an audit performed by an internal auditor on the institution's staff. In publicly controlled institutions, an independent auditor may be an official of the governmental body controlling the institution but independent of the executime officer of the educational institution.

Independent Operations Program — A support program consisting of those program elements which are independent of, or unrelated to, basic missions of the institution.

Input — The resources consumed when carrying out a program.

Institutional Accounting — See Fund Accounting.

Institutional Plan — A comprehensive document which outlines the Educational Plan, the Capital Plan, and the Financial Plan for the institution. Every state institution of higher education should have an Institutional Plan on file in the office of the Ohio Board of Regents.

Institutional Support Program — A support program consisting of those activities within the insitution which provide campus-wide support to the other programs.

GLOSSARY

Instruction — The methodical imparting of knowledge, through an active process involving teachers and students, resulting in formal credit toward an academic degree.

Instruction and Departmental Research Expenditures — Expenditures of instructional departments, including salaries, office expense and equipment, laboratory expense and equipment and other expenses.

Instruction Program — A primary program consisting of all formal instructional activities in which a student engages to earn credit toward a degree or certificate.

Instructional Services — All direct expenditures of activities which are closely allied with the instructional programs but cannot be included under departmental instruction including the following departments: Instructional Materials, University Computer Service, Institutional Studies, Humanities Reading Program, and the Institute for Research and Training in Higher Education.

Interdepartmental Transactions — The sales and services of general storerooms and service departments and the transfer of equipment from one department to another.

Interfund Reimbursement — Amounts paid from one fund to a second fund, for goods or services provided by the second fund.

Interfund Transfer — Transfers of monies from one fund to another.

Intergovernmental Income or Revenue — Amounts received from other governments as fiscal grants-in-aid, or as reimbursement for performance of services for the paying government.

Internal Audit — An audit made on a continuous basis by persons on the staff of the business office.

Investment in Plant — A subgroup of the plant funds accounts in which is shown the total carrying, or book value of all plant properties and facilities except those real properties that are the investment of endowment and similar funds.

Invoice — Includes estimates on contracts, or a statement showing delivery of the commodity or performance of the service, or a detached statement of the work accomplished, material supplied, or labor furnished and the sum due pursuant to the contract or obligation.

Joint Product Cost — The cost incurred in association with an activity which produced outputs for more than one program.

Land — A component of capital assets which includes the building sites, parking lots, athletic fields and other real property owned and utilized by an institution.

Lapse — Funds not encumbered by close of fiscal period for which appropriated.

Libraries — All direct expenditures of the main institutional library and any departmental libraries which are supervised by the institution's chief librarian, including the expenditures for books and for the time professional library staff members, who also give instruction in library science, spend working in the libraries.

Life Income Funds — The funds acquired by the institution under plans by which it obligated itself to pay variable annuities, based on the value of the gifts and the earnings of the fund (or some variable rate), to the donors of the gifts during their lifetimes, and possibly to one or more survivors during their lifetimes.

Line Item Budgeting — A budget method on which allotments are based on line-items, e.g., salaries, supplies, equipment, etc.

Line Item — This is a classification of income and expenditures by object codes.
For example: 090 = tuition income
100 = salary expenses

Loan Funds — The funds available for loans to students.

Long-Range Financial Plan — Three years or more.

Financial Plan — A general plan of how income and expenses will be acquired and utilized to support both the Educational Plan and the Campus Master Plan. It is usually projected for a period of 3-10 years and is described in less specific terms than the Current Operating Budget. Generally, more detail is provided for the first few years of the Long-Range Financial Plan; e.g., 2 biennium years, than the latter years, e.g., 3 biennium years. Thus, the amount of detail generally declines as the period of the plan increases.

Low-Order Cost Center — One that provides a greater amount of services to other cost centers while receiving relatively fewer services. High-low priority ranking of cost centers is employed in the recursive allocation technique.

Managment Information System (MIS) — The configuration of men, machines and methods which supports management in the collection, storage, processing and transmission of information

Major Activity — The level of classification used to designate the major centers of activity through which the institution operates, i.e., colleges, administrative and service offices.

Major Function — One of the five major areas (institution and general, organized research, public services, auxiliary enterprises and student aid) in which the colleges and universities of Ohio render service.

Major Object Code — A numeric code designation which describes the broad classification of expense for which an appropriation is made, i.e., personal service, supplies, equipment. etc.

Marginal Cost — The increase in total cost caused by the production of one additional unit of output.

Minor Activity — The level of classification used to designate the subordinate centers of activity, such as academic department or auxiliary enterprise unit.

Minor Object Code — A numeric code designation which provides a detailed description of the particular classification of an expenditure, e.g., within the major object "supplies", the minor objects food supplies, forage and veterinary supplies, fuel, office supplies, etc.

GLOSSARY

Mission — The tasks or functions to be performed by an educational institution. For what purposes does the institution exist in the areas of instruction, research, public service, etc.?

NCHEMS — National Center for Higher Education Management Systems at WICHE.

NCHEMS Costing & Simulation Techniques — Refers to techniques and software developed by NCHEMS for asking and answering "what if" questions in terms of cost. Examples of "what if" questions are:

a. What if we increased the faculty workload 10%?
b. What if we decreased class size to a maximum of 30 in this discipline?
c. What if we change the faculty rank mix to add more full professors?

The techniques are used also in forecasting resource requirements for future time spans.

NCHEMS — PCS — Program Classification Structure developed by NCHEMS.

NCHEMS — RRPM — Resource Requirement Prediction Models developed by NCHEMS.

Net Investment in Plant — The equity account in the investment in Plant subgroup of the Plant Funds accounts which shows the amount of institutional funds expended for plant assets, excluding any indebtedness against the assets.

Net Square Feet — The sum of all areas on all floors of a building including hallways, custodial, circulation, and mechanical areas.

Objectives — The measurable attainments or desired results set for programs over a short period of time (e.g., one year). Objectives are generally regarded as progressive steps toward a goal. Thus, a series of objectives should lead to one's goal.

The requirements of a written objective are:

1. It must be related to a goal;
2. Be measurable or observable;
3. Specify the method of measurement and criteria for evaluation; and
4. State the time period for achievement

Operating Expenses — Charges incurred, whether paid or unpaid, for operation, maintenance, and interest and other charges for operating purposes during the fiscal period.

Opportunity Cost — A benefit foregone. The cost of any resource with alternative uses that is committed to the production of higher education outputs.

Organized Research — The activities pertaining to separately budgeted research, including but not limited to, university-sponsored, federally sponsored or commercially sponsored research.

Organized Research Program — A primary program consisting of those research-related program elements established within the institution under the terms of agreement with agencies external to the institution or separately budgeted and conducted with internal funds.

Other Separately Budgeted Research — Research divisions and activities, such as research bureaus, research institutes and experiment stations, as distinguished from sponsored research. The term excludes research carried on as part of the regular instructional services which is classified as instruction and departmental research.

Outputs

Something produced — the product and by-products of a process, system or program.

Examples of output indicators are:

- Student credit hours
- Headcounts
- Contact hours
- Number of prepared budget reports
- Number of purchase orders processed.
- Number of square feet of space cleaned
- Number of students counseled daily (average)
- Number of graduates by program

Outstanding Encumbrance

That portion of posted encumbrance represented by the difference between the amount of the encumbrance and the total of expenditures to date.

Over-Run (Of an Encumbrance)

An expenditure which is for an amount greater than the original encumbrance.

Partial Payment

An expenditure which retires only a protion of an encumbrance and which will be followed by subsequent payments. Code vouchers accordingly.

Personal Service

Both an appropriation item and a major object, covering full-time, part-time, per diem and contracts for payments for salaries; wages, fees paid to individuals and companies for services or personnel, witness fees; prisoner and patient compensation; student stipends; PERS and other fringe benefits.

Planning

A management process which attempts to predetermine a course of action. The planning process is characterized by a systematic consideration of goals and objectives; priorities and alternatives; identification of programs; calculation and allocation of resources, and evaluation. Planning is a continuous process and should not be categorized as either, short-range or long-range.

Plans

A course of action. A statement of the systematic program to be used to reach a goal or objective. A plan displays the inter-relationship between goals and the availability of resources to meet those goals. Plans are visible results of the planning process. Plans are referred to as short-range or long-range.

Plant

The physical property owned by the institution and used for institutional purposes, such as land, buildings, improvements other than buildings and equipment (including library books and livestock).

Plant Funds

Funds which have been contributed, designated or borrowed for the acquisition or construction of physical property used for institutional purposes.

Plant Operation and Maintenance

All plant operation and maintenance expenditures as indicated by the following departments: Administration, Janitorial Service, Repair of Buildings, Care of Grounds, Heating-Power Plant, Purchased Utilities, Campus Security, Operation of Motor Vehicles, and other, plus expenditures for fire protection, property insurance, rental of property, refuse disposal, and equipment repairs.

GLOSSARY

Policy — A premise of statement, generally broad in nature, used to guide and determine present and future administrative decisions.

Pooled Endowment Funds and Funds Functioning as Endowment — An endowment fund in which the fund assets have been consolidated for investment purposes.

Primary Cost Center — A cost aggregation point identified for cost finding purposes within the primary programs (i.e., instruction, research and public services) of the Program Classification Structure.

Primary Programs — That portion of the Program Classification Structure that contains the activities directly related to the accomplishment of the missions of higher education.

Priorities — Establishing the relative importance of specific activities related to the achievement of goals and objectives.

Private Gifts and Grants — Amounts received as gifts and grants from corporations, foundations, institutions, individuals or any other source other than governmental units.

Procedures — A particular way of doing things. A series of steps followed in a regular definite order.

Programs (1) — A group of related resources used to achieve a goal of objective. Programs set for the output to be realized, the activities to be carried on, and the resources to be consumed over a given period of time.

Program (2) — A stratum in the Program Classification Structure hierarchy. The major institutional missions and related support objectives. The PCS is based on seven programs.

Program Analysis — The systematic examination and comparison of alternative courses of action with regard to their cost and effectiveness to illuminate the implications of each alternative as a basis for an informed decision. Program analysis is a cost-effectiveness analysis applied to specific programs.

Program Budgets — Budgets expressed in terms of programs as contrasted to organizational units of line items.

Program Budgeting — A Financial Plan that involves a systematic consideration of the following:

1. The establishment of goals and objectives of programs for specific outputs;
2. The analysis of programs and selection of alternatives and priorities;
3. A systematic consideration of the management of total resources;
4. The conversion of priority programs into dollars and cents with a commitment for a specific period of time, e.g., one or two years; and
5. The establishment of a program management system to monitor and evaluate programs. Programs are constantly evaluated to ascertain the relationship to actual results to planned goals and objectives.

Programming — The design of programs which contribute to achievement of the goals and objectives in the educational system.

Program Element (1) The lowest level of aggregation in the Program Classification Structure hierarchy. The program element represents the smallest unique collection of resources that are output producing activities (i.e., a collection of resources, technologies, and policies which through their integrated operation, produce goods or services that are of value to the organization because they contribute to the achievement of an institutional objective).

Program Element (2) The lowest level of aggregation in the program structure. In this manual, we will use the term subprogram in lieu of program element.

Program Classification Structure (PCS) A classification system that categorizes the activities of an organization according to their relationship to the organization's objectives. Reference to the publication by that name developed by the National Center for Higher Education Management Systems.

Program Evaluation A systematic process for determining the effectiveness of a particular program or program component. Evaluation of programs is based on a comparison of actual results with planned goals and objectives.

Program Management The supervision and coordination of programs.

Program Manager The individual responsible for planning and designing of a specific program and the coordination of the programs' plans.

Program Measures The quantitative indicators or resource utilization, activities and outputs associated with a program element.

Program Structure A classification of all the activites of an organization according to programs, each of which can be related to specific goals and objectives. A program structure provides the framework for analyzing programs and subsequent decision-making regarding the allocation of resources to programs.

Public Services The activites pertaining to medical center units, institutes and workshops, telecommunications center and other programs and facilities which are not part of the institution's continuing instructional programs, but are designed primarily to serve the public.

Public Service Program A primary program consisting of those program elements within the institution which produce outputs directed toward the benefit of the community or individuals residing within the geographic service areas of the institution.

Purposes Analogous to mission. What does the educational insitutions exist for? What does it propose to do? Why does it exist?

Quasi-Endowment Funds Funds which the governing board of an institution, rather than a donor or other outside agency, has determined are to be retained and invested. The term "funds" functioning as endowment may also be used to designate funds. The governing board has the right to decide at any time to expend the principal of such funds. (See Funds Functioning as Endowments)

Recipient Cost Center A cost aggreation point to which costs are assigned from donor cost centers through the use of an allocation technique.

GLOSSARY

Recovery of Indirect Expense — Amounts received which represent a reimbursement for indirect expenses arising from organized research and public service or training projects.

Recursive Allocation — A method of apportioning the cost of support programs to primary programs based on the premise that support program activities may contribute directly to any program (support or primary) which has a higher-order ranking. Implicit to the recursive allocation technique is the ability to rank all cost centers into a high-low order with the low order cost centers being totally distributed among the higher order cost centers. Also referred to as step-down allocation.

Renewal and Replacement Funds — Funds specified by the external sources or designated by governing boards to be used for the renewal and replacement of insitutional plant assets. Reported either in a separately balanced subgroup of the Plant Funds group or in a clearly identified equity account in the Unexpended Plant Funds subgroup of plant funds.

Replacement Cost — The original value of an asset expressed in current dollars. Replacement cost is calculated by applying a replacement cost index to the historical cost of an asset.

Replacement Cost Index — A ratio of current costs to original costs for a particular class of assets.

Research — Critical and exhaustive investigation or experimentation having as its aim the discovery of new facts and their correct interpretation, the revision of accepted conclusions, theories of laws in the light of newly discovered facts of the practical application of such new or revised conclusions, theories, or laws, including the training of students through such investigation or experimentation.

Reserve — Monies set aside in the budgeting process. Reserves are of two types: (1) General purpose, such as safety or contingency, or (2) Specified purpose, e.g., new programs, equipment replacement, salary increases.

Reserve for Working Capital — A reserve established to recognize the fact that a portion of current general funds has been utilized to finance receivables, inventories and similar items and, therefore, an equivalent amount of surplus is not available for expenditures.

Resources — Personnel, space, materials (operating support services) and equipment. Before budgetary decisions can be made, resources must be converted into dollars and cents.

Restricted Funds — Funds restricted by outside agencies or persons with regard to use. Restricted funds are to be contrasted with funds over which the institution has complete control and freedom of use.

Retirement of Indebtedness Fund — A plant fund, consisting of cash and temporary investments, in which the amounts designated for the retirement of indebtedness have been accumulated.

Revenue — Receipts of state government, including taxes, intergovernmental revenue, charges, and other revenue, contingent receipts, and interfund transfers.

Revenue Account — An accounting record established to record receipts from a particular source of income or for a particular purpose.

Revolving Fund — A fund provided to carry out a cycle of operations. The amounts expended from the fund are restored thereto from earnings from operations or by transfers from other funds, to ensure it is always intact, either in the form of cash, receivables, inventory, or other assets.

Role — Analogous to mission and purpose.

Rotary — A fund whose income must be devoted to a special use, in accordance with provisions of law or Controlling Board action. Each rotary fund is limited in its use to a specific agency. Rotary funds are appropriated with dollar limitation.

Rotary — Commercial — A rotary fund whose primary source of income is from the sale of goods and services to other state agencies. Segregation of commercial and noncommercial rotaries avoids duplication of reporting income and expenditure.

Rotary — Operating — Funds credited to the direct support of operations out of monies received in the State Treasury from revenue received from the operating rotary.

Rotary — Reimbursement — A revenue collection account from which the General Revenue fund is reimbursed for expenses of the activity from which the revenue is derived.

Rotary — Restricted — An operating rotary which must be alloted by apporpriation item by month, by quarter, or is earmarked in some manner.

RRPM — Resources-Requirements Prediction Models.

Salaries and Wages — The gross cash salary of the individual from all institutional sources before deductions or exclusions, together with all staff benefits, directly and explicitly identifiable with the individual as to dollar amount and value, e.g., employer's FICA contribution, employer's contribution to TIAA-CREF or other retirement fund, employer's share of medical, hospital, accident, or life insurance premiums, and market value of goods or services provided to an employee for personal use or consumption.

Salvage Value — The sale, trade-in, scrap, or junk value of an asset when it is no longer useful to an institution.

Section — A group of students assembled for instruction in a regularly scheduled meeting of a course.

Selection Criteria — Rules for judging the merits of alternative courses of action.

Service Enterprises — An entity that provides a service to the various divisions of an institution, which might be purchased from commercial sources, but which, for reasons of convenience, cost, or control, is more effectively provided through a unit of the institution. Charges to users are determined by the costs of the services rendered. Examples are print shop, laundry, repair shop and photographic shop.

Services to the Public — Those educational activities of the institution which are neither instruction or research as defined and which primarily serve a clientele other than the institutions' own staff and degree-credit students are conceived in this analytic framework to constitute the primary function services to the public.

GLOSSARY

Short-range — One or two years.

Simultaneous Allocation — See cross-allocation.

Source of Income — The term used to designate one or another of the types of revenue usually available to an educational institution.

Special (other) Fund — All funds other than the current general fund and the current auxiliary enterprises fund.

Standards — Something established by authority, custom, or general consent as a model or example. Generally, there are two kinds of standards — one is concerned with what is desired, the other suggests limit.

Standard Object Code — The system that is used for classifying expenditures according to that which is received in return (salaries, postage, etc.) or income according to source.

Step-down Allocation — See recursive allocation.

Student — A person registered in an institution of higher education and pursuing a course of study.

Student Aid — The income and expenditures that are specifically designated for scholarships, fellowships, loans, grants, prizes and other similar purposes.

Student Credit Hour — A unit of measure which represents one student engaged in an activity for which one hour of credit toward a degree or other certificate will be granted upon successful completion.

Student Fees — All income derived from charges to students which are not to be included as income of a specific auxiliary enterprise. These include instruction and general fees, student service fees, non-resident surcharge fees, application or matriculation fees and other fees.

Student Services — All expenditures directly related with serving the students as indicated by the following departments: Minority Student Recruitment, Admissions Office, Campus Calendar, Dean of Students, Dean of Men, Dean of Women, Foregin Student Office, Health Service, Health Service-Medical, Career Relations, Residence Hall Coordination, Registrar, Testing and Counseling, Student Organizations, Student Activities, Student Financial Aid, Cultural Events and Ombudsman.

Student Service Program — A support program consisting of those program elements related to the institution's student body, excluding the degree-related curriculum and student records.

Sub-Function — The level of classification used to designate the various types of activities within the five major functions.

Sub-Program — A sub-grouping of programs to ensure the grouping is pertinent to planning for the accomplishment of stated objectives.

Subsidy	Monies granted from one branch of the government to another; i.e , money received by the State from the federal government and money distributed by the state to local governments.
Sub-Source	The term used to identify one of the many kinds of revenue available from a particular source
Sub-Type of Asset or Liability	A further breakdown of a class of assets or liabilities used to designate location of bank, type of security, class of creditor, etc.
Supplies and Expense	All operating expenses other than salaries and wages.
Support Cost Center	A cost aggregation point identified for cost finding purposes within the support programs (i.e., academic support, student support, institutional support, and independent operations) of the Program Classification Structure.
Support Programs	That portion of the Program Classification Structure that contains those activities which are necessary or vital for the successful operation of the primary programs.
Tax Identification Number	The number used by an employer to report his Federal Tax withholdings, and used as an identification number for vendors to the state.
Term Endowment Funds	Funds which donors or other outside agencies, by the terms of the instruments of gift, have provided are to be released from inviolability to permit all or parts of them to be expended upon the happening of a particular event or the passage of a stated period of time.
Transaction Code	A numeric or alphabetic code used to identify the desired effect of a particular transaction in an appropriation account or other accounting record. The symbolic language by which an accounting document is posted to a record maintained on punched cards, magnetic tape or disc storage devices.
Transfer (1)	Movement of monies (cash or appropriation authority) between or among funds and/or items of appropriation.
Transfers (2)	The identification of the authorization by a governing board of a specific change in the use of funds, and the moving of their assets, liabilities and balances from one fund group to another; e.g., unallocated current funds transferred to loan funds; and, other funds or portions of balances of fund groups transferred to fund groups that encompass the newly authorized uses.
Transfer Payments	Funds received by the institutions from government, business and other sources which are subsequently distributed to third parties. These funds do not represent payment for services rendered by the institution.
Unalloted Appropriation	The portion of appropriation not allocated in allotment process or not expended during fiscal period.
Unallocated Balance of Unrestricted Current Funds	That part of the balance of unrestricted current funds that has not been set aside for specific purpose. It is the free and unassigned balance of unrestricted current funds available for allocation to future operating purposes or for other uses as designated by the governing board. Synonymous with the term surplus in commercial accounting, which is inappropriate in institutional accounting.

Unappropriated Surplus — That part of surplus which has not been set aside for any specific purpose

Unencumbered Balance — A term used with reference to an annual appropriation to indicate the unobligated portion of the appropriation at any given time, and also, with reference to a quarterly allotment to mean the unobligated portion of the periods allotment

Unexpended Balance — A term used with reference to an annual appropriation to mean the unspent portion of the appropriation at any given time, and also with reference to a quarterly allotment to mean the unspent portion of that period's allotment The same as unencumbered except for cash resources.

Unexpended Plant Funds — Funds specified by external sources or designated by governing boards for the acquisition or construction of physical properites to be used for institutional purposes.

Unit Cost — See average cost.

Useful Life — The period of economic utility during which an asset renders service to an institution

Weighted Student Credit Hour — A unit of measure, a student credit hour weighted by level of instruction, e.g., Graduate = 6, General studies = 1.

WICHE — Western Interstate Commission on Higher Education.

Working Capital — A portion of the balance or unrestricted current funds set aside as a reserve to recognize the fact that a part of the unrestricted current funds assets have been utilized to finance receivables, inventories and similar items and thus are not available for allocation to other uses.

Zero Based Budgeting — Eliminating the prior budget base and developing a new budget based on new priorities and alternatives.