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ABSTRACT

The second volume of the revised "Higher Education Finance Manual" (HEFM), this data users' guide is oriented to the nonaccountant and describes the kinds of information about postsecondary education that can be derived from institutional financial data. Contents include: a description of fund accounting for higher education, a discussion of the relationship between accounting data and programmatic financial data, a guide to the implementation of the HEFM guidelines at the state level, and a guide to the implementation of the HEFM guidelines at the institutional level. An overview of how to understand and use institutional reports explains each of the three traditional financial statements: the balance sheet, the statement of changes in fund balances, and the statement of current funds revenues, expenditures, and other changes. For each financial statement, its purpose, format, definition of terms used, and limitations are discussed. The discussion of implementation at the institutional level is based on written comments by key persons at seven institutions that have implemented the HEFM guidelines. Additionally, the relationship between the most widely used structure for operational data in higher education (the HEFM functional expenditure categories) and the most widely used structure for programmatic data in higher education (the NCHEMS Program Classification Structure) is examined. (SW)

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Volume 2:
Higher Education Finance Manual:

Data Users' Guide

National Center for Higher Education
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The mission of the National Center for Higher Education Management Systems (NCHEMS) is to carry out research, development, dissemination, and evaluation activities and to serve as a national resource to assist individuals, institutions, agencies and organizations of postsecondary education, and state and federal governments in bringing about improvements in planning and management in postsecondary education.

Higher Education Finance Manual:

Data Users' Guide

Douglas J. Collier
Richard H. Allen

1980

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Contents

Foreword

The *Higher Education Finance Manual: Data Users' Guide* was developed to serve as a companion to the *Higher Education Finance Manual: Data Providers' Guide.* It was designed specifically for those persons who wish to make use of higher-education accounting data even though they have no formal training in the field. I feel that the *Data Users' Guide* does an excellent job of describing, for non-accountants, the principles of fund accounting as well as guiding them in the interpretation of institutional financial reports. It describes accurately and completely the existing state of the art of higher-education financial reporting and does so in nontechnical language, which can be understood with a minimum of effort by the layman in accounting. Anyone interested in higher education should be able to better understand and use institutional financial reports with the aid of this document.

In my roles as both Chairman of NACUBO's Accounting Principles Committee, during the writing of *College and University Business Administration* (1974), and member of the AICPA/NACUBO/NCHEMS Joint Accounting Group, I was intimately involved in the formulation of these standards for financial reporting. I am pleased that this document, therefore, brings about a greater understanding of uniform financial reporting guidelines to a wider audience. If higher education is to prosper in the coming decade of enrollment decline and financial stringency, it is important that all decisionmakers in higher education have an understanding of the finances of colleges and universities. I strongly recommend the *Data Users' Guide* to anyone seeking such an understanding.

W. Harold Read
Vice President Emeritus for
Business and Finance
The University of Tennessee

Preface

The *Higher Education Finance Manual: Data Users' Guide* is the second volume in the *Higher Education Finance Manual (HEFM)* series. The three volumes in the series together revise and replace the original single-volume *Higher Education Finance Manual* (NCHEMS Technical Report 69). Since higher-education financial-reporting practices have been and will continue to be subject to revision, the guidelines described in the *HEFM* series will also be subject to revision. However, since accounting practices are relatively stable, those described in the current *HEFM* series are not likely to change in the near future. The series is designated to be a comprehensive guide for providers and users of financial information reported by the institutions of postsecondary education. The material in the *HEFM* revision was developed at NCHEMS as part of the original *Higher Education Finance Manual* project (1972-74), supported by the National Center for Education Statistics (NCES). It was supplemented and refined in a follow-on project, the *Higher Education Finance Manual*/State-Level Technical Assistance project (*HEFM*/SLTA), also supported by NCES, which in addition provided technical assistance to state agencies seeking to implement the *HEFM* guidelines.

The three volumes in the revision are the *Higher Education Finance Manual: Data Providers' Guide,* the *Higher Education Finance Manual: Data Users' Guide,* and the *Higher Education Finance Manual: The Source/Use Concept.* The *Data Providers' Guide* comprehensively describes national financial-reporting standards, including those prescribed for the HEGIS reports, and includes the information needed to comply with those standards. It includes:

1. A complete set of definitions of expenditure categories and revenue categories endorsed by the National Center for Higher Education Management Systems (NCHEMS), the National Association of College and University Business Officers (NACUBO), the American Institute of Certified Public Accountants (AICPA), and NCES
2. An activity look-up table, with specific guidance for assigning activities to expenditure categories and subcategories, endorsed by NCHEMS and NACUBO
3. A glossary of financial accounting terms
4. A description of generally accepted accounting principles for postsecondary education
5. Exemplary formats for financial statements

Oriented to the nonaccountant, the *Data Users' Guide* describes the kinds of information about postsecondary education that can be derived from institutional financial data. Included are:

1. A description of fund accounting in higher education
2. A discussion of the relationship between accounting data and programmatic financial data
3. A guide to the implementation of the *HEFM* guidelines at the state level
4. A guide to the implementation of the *HEFM* guidelines at the institutional level

The *Source/Use Concept* describes the principles included in presenting financial information in a format showing where money comes from (sources) and where it goes (uses). Included are:

1. A general description of the source/use concept
2. Suggestions about ways to develop source/use formats for analysis and communication
3. A description of the standard source/use matrix and its uses as a supplementary financial statement

Portions of the *Higher Education Finance Manual* series have been reviewed by NCHEMS staff, the task force of the *HEFM*/SLTA project, individuals in its pilot-test states, a network representing the state-level postsecondary-education finance community, and a joint NCHEMS/NACUBO committee on the guidelines of the Joint Accounting Group. Since much of the material was drawn from the first edition of *HEFM*, the *HEFM* Task Force has reviewed that portion of the document as well.

Acknowledgments

The authors are grateful to all those who assisted in the development of this book. We are particularly indebted to William Loomis and Cliff Eberhardt of the Oregon Department of Evaluation, Lucie Lapovsky of the Maryland Board of Higher Education, and Peter Miniati of the Rhode Island Department of Education, who provided many useful insights about the implementation of the *HEFM* guidelines at the state level. Similar insights were provided at the institutional level by Jerry Wegenast of North Dakota State University, Tony Birch of Lane Community College, Kenneth Smith of the University of Southern Mississippi, James Martin of the University of Colorado, Laura Lavespere of Northwestern State University of Louisiana, and Michael Ray of Northern Michigan University. We would also like to recognize Clarence Scheps and Harold Read for adding their expertise to our discussion of understanding financial reports.

For their assistance in structuring the project, we are grateful to the members of the *HEFM*/SLTA Task Force: William Arceneaux, State Higher Education Executive Officers (SHEEO); Carl Blackwell, National Association of State Business Officers; John Folger, Education Commission of the States; John LaFaver, National Conference of State Legislatures; Reuben Lorenz, National Association of College and University Business Officers; and Jane Ryland, SHEEO/NCES. We would also like to thank Paul Mertins and George Wade, who were NCES project officers, for their efforts throughout the project, and Frank Schmidtlein, evaluator of the project, for his constructive feedback.

We extend special thanks to NCHEMS Associate Directors Mel Orwig and Dennis Jones for their much-needed advice and support throughout the project. Mary Sue Watkins provided invaluable editorial assistance. Thanks are due also to Linda Smith, Paula Dressler, and Barbara Epp for their secretarial assistance.

Introduction

Planners and managers in postsecondary education, at both the institutional and state level, often need to interpret and use institutional financial information. Since most of this information is derived from institutional accounting systems, it is usually presented in the format recommended by generally accepted accounting principles. Fund accounting for postsecondary education is complex, often producing financial statements that may easily confuse legislators, board members, and executive-level decisionmakers at both the state and institutional level. Even many persons in analytical roles (institutional research officers, state-agency staff, legislative staff) often do not fully understand what is and is not described in institutional financial statements. It is toward these types of data users that this document is directed.

Although financial information can be presented in a format that is more readily understandable (see the *Higher Education Finance Manual: The Source/Use Concept* for such a format), it is important that nonaccountants be able to understand, interpret, and use traditional financial reports. Essentially, part 1 provides an overview of how to understand and use institutional financial reports. It describes the principles of fund accounting for postsecondary education in nontechnical language and explains each of the three traditional financial statements—the Balance Sheet, the Statement of Changes in Fund Balances, and the Statement of Current Funds Revenues, Expenditures, and Other Changes. For each financial statement, its purpose, format, definition of terms used, and limitations are discussed.

It is appropriate that users of financial information be as involved in the development of structures for financial reporting as are data providers. However, the design of financial reporting structures is often left to data providers because of their superior technical understanding of financial reporting. This can lead to a structure that does not adequately answer the questions of data users, thus limiting the utility of the data. Part 2 provides for the data user, again in nontechnical terms, an overview of strategic choices to consider when implementing the *HEFM* guidelines. The discussion of implementation at the state level is based largely on the experiences of the pilot-test states of the *HEFM*/SLTA project. The discussion of implementation at the institutional level is based on written comments by key persons at seven institutions that have implemented the *HEFM* guidelines.

Since the beginning of the program-budgeting movement in the public sector in the early 1960s, there has been disagreement about the use of operational data versus programmatic data. Operational data convey the information needed by organizational units to do their jobs and communicate their accomplishments. Program data convey information about the ultimate goals of the institution and the activities necessary to accomplish them. This difference in focus creates different kinds of structures for reporting information. Part 3 discusses the relationship between the most widely used structure for operational data in higher education (the *HEFM* functional expenditure categories) and the most widely used structure for programmatic data in higher education (the NCHEMS Program Classification Structure). The evolution of the two structures, their differences in perspective, and the way operational data can be transformed into programmatic data are described.

Part I

Understanding Financial Reports

Introduction to Part I

One of the perennial problems encountered in efforts to effectively communicate financial data about postsecondary education has been a lack of understanding by nonaccountants of the basic concepts of postsecondary-education fund accounting. Few constituencies to which institutions must communicate financial data have a background in financial matters, and since the recipients of financial data must deal with many other issues, they likely are unable to devote a great deal of study to fund accounting. Even among the constituencies with a general understanding of finance, the conventions of postsecondary-education fund accounting are little appreciated. Often a particular constituent has a background in business accounting (frequently the case with many trustees and legislators) or in government accounting (frequently the case with many state-agency staff as well as legislators). But such background may be of little value, since postsecondary-education accounting has a number of conventions that differ from those used in business or governmental accounting. Knowledge of business or governmental conventions can often cause more confusion than would a total lack of experience in accounting.

Part 1 describes the basic principles of postsecondary fund accounting. Chapter 1 outlines the *basic principles* of postsecondary fund accounting for the nonaccountant seeking to understand financial-accounting information. It does not provide a technical description of generally accepted accounting principles for postsecondary education. (See the *Higher Education Finance Manual: Data Providers' Guide*, part 1, for such a technical discussion.) The nonaccountant may also find the Glossary of Financial Data Terms (see *HEFM: Data Providers' Guide*, chapter 8) helpful in understanding the principles of fund accounting.

Chapters 2, 3, and 4 discuss the three basic financial statements usually included in institutional financial reports: (1) the Balance Sheet; (2) the Statement of Changes in Fund Balances; and (3) the Statement of Current Funds Revenues, Expenditures, and Other Changes. The three financial statements are the top-level basic statements that, with the notes to the financial report, are considered by the accounting profession to provide adequate disclosure of institutional financial affairs. If an institution publishes an annual report, these statements should be included. But for many users—trustees, legislators, top institutional administrators—many additional financial analyses and reports are often available. Among the kinds of financial analyses and reports that may be available are:

1. The three basic statements prepared and published once a year after certification by the institutional auditor. The basic financial statements are usually combined in an annual report with the notes to the financial statements (which disclose the basic practices followed by the institution in preparing the report) and supplementary financial statements concerning particular aspects of institutional finances, such as debt service or auxiliary enterprises.
2. Interim (monthly or more frequent) reports to management that give information for decisionmaking. These reports can focus on any type of information needed and can take any kind of appropriate format. An example of this kind of report is budget/expenditure comparisons.
3. Detailed reports for lower-level administrators (for example, department heads). These may include detailed lists of receipts, expenditures, encumbrances, and budget data.

Since the three basic financial statements form the common core of financial reporting, part 1 focuses on them. To assist users in better understanding and more effectively using the data from the three basic financial statements, the following also are described in this part:

1. A description of the basic *purpose* of the statement.
2. A description of the *format* used for each financial statement. This description should help users more easily find the information they need.
3. *Definitions* of data categories typically shown on each financial statement. The definitions in each chapter describe the data usually classified within each category, in addition to discussing the fund-accounting procedures that affect the handling and reporting of the data in that category.
4. A discussion of the *uses and limitations* of each financial statement. For each statement, a set of hypothetical questions are answered using information contained in the statement.

It is important to realize that the financial statements in the following chapters are illustrative, not prescriptive; the detail of the financial data in each report is not necessarily essential or even useful for all purposes or in every setting. Many institutions find it necessary to adapt the formats of the three traditional financial statements to fit their own needs, and many include more information in financial statements than is shown in the examples here.

The user of financial reports should be aware that all financial statements prepared in accordance with generally accepted accounting principles are prepared on an *accrual* basis. This means that revenues are reported during the fiscal period that they are earned, and expenditures are reported during the fiscal periods whose activities they are intended to support. (This is contrasted with cash-basis accounting, whereby revenues are reported when received and expenditures reported when paid out.) For revenues, this becomes important when considering revenues upon which the funder has placed restrictions regarding their use—that is, restricted revenues. Although the cash for a purpose specified by a funder may be in hand, the revenue is not earned until the funds are expended in a way consistent with the restriction. For expenditures, it is important when expenditures and the activities with which they are associated fall into different fiscal periods (for example, prepayment of expenses). The major exception to adhering to strict accrual accounting in postsecondary education is that institutions are not required to account for depreciation.

1

Principles of Fund Accounting

Background

Financial reporting is designed to provide various publics with information about the operations and financial status of an enterprise. The accounting profession views this as a disclosure of pertinent financial information for the purpose of promoting accountability by the management of an enterprise. Standards for financial reporting are specified to ensure that the disclosure includes all necessary information and that the reports are standardized enough to allow meaningful comparisons. This principle of financial reporting is maintained for enterprises that are educational, governmental, nonprofit, or commercial.

Because the nature and objectives of enterprises differ, *different* principles have been developed for different sectors. Although useful for providing information for planning and management purposes, financial reports may not offer the kinds of information needed for some decisions. If the statement has been prepared in accordance with generally accepted accounting principles, certain types of information will be reported, definitions will be generally consistent, and formats will be very similar. But financial information needed for particular decisions will not always be included.

The principles of financial reporting in the postsecondary-education sector are heavily influenced by the nonprofit nature of the enterprise. Since an institution exists to serve a range of public needs (instruction, research, public service) rather than to generate profits, the financial-reporting structure for postsecondary education focuses on needs rather than profits or other measures used in the commercial sector. Although obliged to use their resources as efficiently and effectively as possible, postsecondary-education institutions need not show an excess of revenues over expenditures. Although an institution wants to provide for its future operating needs (and an accumulation of excess revenues over expenditures is an important source of funds for future needs), it is not necessary for an institution to show such an excess to be considered well managed.

A second factor important in postsecondary-education financial reporting is the relationship between revenues and expenditures. In the commercial sector, each product is purchased by an identifiable consumer. However, in postsecondary education, the products (instruction, research, public service) are paid for from a number of sources (governmental appropriations, tuition, private gifts), each of which contributes to the total cost. The persons or agencies providing the revenues are not necessarily the same persons or agencies that directly benefit from the services provided (for example, donors usually receive no goods or services in return for their gifts). An important aspect of the relationship between revenues and expenditures in postsecondary education is the various types of limitations often placed on funds received. Unlike the commercial sector, where revenues can be spent for any purpose the firm desires, in postsecondary education, many revenues are received with "strings attached." That is, they may only be expended for a particular purpose or by a particular organizational unit. The existence of such *restrictions* has strongly influenced postsecondary-education accounting practices—particularly with regard to the strong emphasis that has traditionally been placed on fiduciary accounting (that is, showing that a particular restriction has been met in the use of funds).

These characteristics of postsecondary education—its nonprofit nature and the relationship between revenues and expenditures—have given rise to postsecondary-education fund accounting. Fund accounting focuses on the flow of revenues (state appropriations, tuition) through the institution to their use for particular purposes (instruction, research, public service). The responsibility for many different kinds of funds requires an institution to keep track of the flow of funds along a number of dimensions, including: fund group, restriction category, and functional expenditure category and revenue source.

It should be noted that the dimensions discussed below are described in the way recommended by generally accepted accounting principles. A particular state or institution may need to make adaptations to these definitions to meet some particular local need (state law, particular issues requiring specific kinds of data). Any such variations need to be considered when interpreting individual financial reports.

Fund Groups

Institutions establish *funds* to keep track of individual sources of revenue and the expenditures associated with those revenues. This is done primarily to ensure fiduciary responsibility to funders (that is, ensuring that their funds will be spent for the purposes specified) and to facilitate administrative convenience and control by separating different kinds of financial transactions (that is, separating expenditures associated with the ongoing activities of the institution from those associated with the purchase of capital assets). In certain instances, institutions include revenues from a variety of sources in the same fund if they are subject to the same fiduciary responsibilities and set of administrative controls. For example, public institutions often establish a General Fund for all revenues (state appropriations, tuition) for which they are more or less responsible to state authorities. However, the need for fiduciary control often dictates establishing a separate fund to receive revenues and accumulate expenditures associated with a particular activity. For example, each separate contract to perform a specific activity (such as a research project), no matter how small, usually requires the establishment of a separate fund. Each fund is a self-balancing entity with all transactions either adding resources to or subtracting resources from an existing pool of funds.

An individual institution may have hundreds or even thousands of funds designed to keep track of expenditures and revenues. As a reporting convention, all of these funds are usually aggregated into *fund groups* that identify revenues and expenditures associated with the major types of fiduciary responsibilities and administrative controls. The postsecondary-education financial community has defined six standard fund groups for accounting and financial reporting: (1) Current Funds, (2) Loan Funds, (3) Endowment and Similar Funds, (4) Annuity and Life Income Funds, (5) Plant Funds, and (6) Agency Funds. Financial reports usually are organized to show separately the status and transactions of each fund group. Each fund group has its own column or page in the various financial statements.

The *Current Funds* group includes all resources used or available for use in carrying out the current operations of the institution. These funds are used for paying salaries to faculty and staff, buying library books, and operating power plants, dormitories, food services, and so forth.

The *Loan Funds* group (often called the Student Loan Funds group) includes those resources that have been loaned or are available for loans to students, faculty, or staff. The resources included in this fund group may come from gifts, federal grants, or transfers of general institutional revenues. Repayment of principal and interest on these loans is treated as revenue to the Loan Funds group and is available for future loans.

The *Endowment and Similar Funds* group includes resources that are invested with the intention of maintaining the principal intact while earnings on the investments are available for institutional use. This fund group includes (1) *endowment funds,* which include resources for which the donor has stipulated that the principal of the gift always remain intact with only the earnings available for expenditure; (2) *term endowment funds,* which include resources for which the donor has stipulated that the principal remain intact with only the earnings available to be expended until a set period of time has lapsed or a specific event has occurred; when these conditions are met, the principal may also be expended; and (3) *quasi-endowment funds,* or *funds functioning as endowment,* which are resources not stipulated by the donor to be nonexpendable, but which the institution's governing board has decided should be invested, the principal retained, and only the earnings spent; the governing board can, at its discretion, decide to expend the principal.

The *Annuity or Life Income Funds* group includes all funds carrying a stipulation that the institution make payments to one or more specified beneficiaries (often the donor). If the institution is obligated to pay the beneficiary a stipulated annual amount, the fund is classified as an annuity fund. If the institution agrees to pay the beneficiary only the income earned by the invested assets or a stipulated percentage of its market value, it is classified as a life-income fund. Upon the death of the beneficiary, or at some agreed-upon date, the principal of the annuity or life-income fund becomes the property of the institution. It is then available for use at the discretion of the institution, in accordance with the terms of the original agreement. This group of funds is sometimes included as a subgroup of the Endowment and Similar Funds group in institutional financial reports.

The *Plant Funds* group includes all of the institution's physical-plant assets as well as funds set aside for new construction or acquisitions, debt service on plant, and renewal and replacement of institutional properties. Four subgroups are commonly identified within the Plant Funds group: (1) *Unexpended Plant Funds,* which includes funds available for construction or acquisition of physical property; (2) *Funds for Renewal and Replacement,* which includes funds set aside for renovating and improving institutional properties (this does not include routine maintenance of institutional properties); (3) *Funds for Retirement of Indebtedness,* which includes funds set aside to pay off the debt incurred in the construction or acquisition of institutional properties; (4) *Investment in Plant,* which includes the amount of all institutional funds invested in physical-plant assets (that is, the value of all physical properties owned by the institution) and is also the fund subgroup used to report the amount of outstanding debt on the physical plant (mortgages, liens outstanding).

The *Agency Funds* group includes those resources for which the institution acts as a fiscal agent but does not itself own. In such cases, the institution usually provides depository and accounting services to the organization or person(s) to which the funds belong. For example, many institutions will establish agency funds for student organizations and act as a "checking account" for those organizations. Control of the funds, however, remains with the student organizations. When the purpose of a particular financial report is to disclose the total resources available for use by the institution, agency funds are often excluded or simply footnoted.

In summary, each of the preceding fund groups is a collection of individual funds with similar characteristics. The Current Funds group requires attention during the annual (or biennial) planning/budgeting cycle. The Plant Funds group collects the physical assets of the institution. The Endowment and Similar Funds group and the Annuity and Life Income Funds group are collections of the permanent (nonphysical) assets of the institution that can be used to produce future income. The Loan Funds group is maintained as a self-renewing pool of lending resources from which student loans can be made. Finally, the Agency Funds group segregates those funds belonging to parties other than the institution from those resources owned by the institution.

Restriction Categories

Within each fund and fund group, various types of limitations are placed on resources available to the institution. Some funds may be used for only certain specified purposes, while others may be used at the discretion of the institution. Funders will often place limits on the use of the funds they provide to an institution. These limits may be narrow (for example, paying laboratory fees for minority medical students) or broad (for example, paying faculty salaries). The notion of restriction categories was designed to aid colleges in maintaining their fiduciary responsibility to funders and to display various categories of resources in financial reports. Each fund group (except the Annuity and Life Income Funds group) can and often does include both unrestricted and restricted funds.

Restricted funds are those monies accepted by the institution on the condition that they be used for a specified purpose. The institution's acceptance of the monies imposes a legal requirement on the institution to use them for that purpose. The typical method for reporting on the use of restricted monies is to establish a restricted fund within a fund group and then accumulate the revenues and expenditures associated with that particular purpose in that fund. Monies may be restricted in a number of ways. First, they may be restricted in terms of their *overall goal.* For instance, funds may be given to the institution on the condition that they be invested and the principal not be expended (for example, an endowment) or that certain limitations be placed on the expenditure of the principal (an annuity, life income, or term endowment). Funds may also be restricted such that they can only be used for student loans or for investments in plant. A fund group has been established for each of these overall goals; monies restricted in this way are said to be restricted to that fund group. Funds not so restricted are placed in the Current Funds group. Second, funds may be restricted to a particular *function* (instruction, research, public service) or *organizational unit* (College of Engineering, Psychology Department) or some subset of functions or organizational units. It is possible to combine types of restrictions. For example, a gift may be given with the stipulation that it be invested and its income used (restricted to the Endowment and Similar Funds group) for an endowed chair for research (restricted to the research function) in the Economics Department (restricted to an organizational unit).

Unrestricted funds are those funds over which the institution has discretionary control and which may therefore be used for any purpose. There are no outside limitations on their use. (State appropriations are usually reported as unrestricted funds, even though the legislature may attach conditions to their use.) Unrestricted funds may be found in most fund groups. A special type of unrestricted funds is *designated funds.* These are monies whose use is constrained by the institution's governing board rather than by an outside funder. They are considered unrestricted funds because the governing board may at any time remove the designation and allow the monies to be used for any institutional purpose. Designated funds may be found in most fund groups and may be designated in any of the ways that restricted funds may be restricted (that is, to an overall goal, to a function, to an organizational unit, or to a combination of those). But the practice of designating funds is distinct from the governing board's adoption of a budget. Designation generally involves earmarking a particular revenue (such as a gift) or a particular asset (such as a fund balance) for a particular purpose with the expectation that the designation will persist beyond the annual budget-planning cycle. Budgeting, on the other hand, involves setting expenditures and balancing them with the appropriate revenues for a single fiscal period.

Revenue Sources and Functional Expenditure Categories

Within the Current Funds group, revenues and expenditures are generally classified according to a standard structure. Revenues are reported by source, and expenditures are reported by use. Generally accepted accounting principles specify 15 revenue categories:

1. *Tuition and Fees.* Includes all fees assessed against students (net of refunds) for current operating purposes. Fee remissions are reported as fee revenues and as student-aid expenditures. Fees that are reappropriated by the state are considered fees (not state appropriations). Sale of goods and services to students (for example, housing or food) are *not* considered tuition and fees.
2. *Governmental Appropriations—Federal.*
3. *Governmental Appropriations—State.*
4. *Governmental Appropriations—Local.* These governmental appropriations include funds made available to an institution through the acts of a legislative body (not including grants or contracts). The source of funds (federal, state, or local) is determined by the level of government making the decision that the funds will be used for the purpose for which they are ultimately expended. For example, if the federal government stipulates a specific use for particular funds but arranges for the funds to be administered by the state, the funds would be classified as federal. On the other hand, if the federal government

distributes funds to the states for unspecified purposes (such as general revenue sharing) and they are later appropriated by the state to the institution, the funds should be classified as state funds.

5. *Governmental Grants and Contracts—Federal.*
6. *Governmental Grants and Contracts—State.*
7. *Governmental Grants and Contracts—Local.* These categories include revenues from governmental agencies that are available for specific projects or programs. Generally, a legislative body will make an appropriation to a governmental agency, which, in turn, contracts with or makes grants to individual institutions. Examples are research projects and training programs. The level of the funder (federal, state, or local) is determined in the same fashion as for appropriations.
8. *Private Gifts, Grants, and Contracts.* Includes all gifts, grants, and contracts (for which specific services must be rendered) received from nongovernmental sources.
9. *Endowment Income.* Includes unrestricted income of the Endowment and Similar Funds group and restricted income from the Endowment and Similar Funds group *to the extent expended for current operations.* (See the discussion of accrual accounting in the Introduction to this part for an explanation.)
10. *Sales and Services of Educational Activities.* Includes revenues derived from the sale of goods produced incidental to the conduct of instruction, research, or public service. Examples of such revenues are film rentals, testing-service fees, and sale of dairy products.
11. *Sales and Services of Auxiliary Enterprises.* Includes revenues generated by an institution's auxiliary enterprises. An auxiliary enterprise is an entity that exists to furnish goods and services to students, faculty, or staff and that charges a fee that is directly related to, although not necessarily equal to, the cost of the service. Examples are residence halls, food services, college unions, and intercollegiate athletics where they are operated as auxiliary enterprises. Internal service departments that charge a fee for service but exist to serve the institution rather than students or staff (for example, motor pools, print shops) are *not* included.
12. *Sales and Services of Hospitals.* Includes all revenues from physicians, services, nursing services, and other professional and patient services of a hospital operated by the institution. Funds used for instruction or research within the hospital are excluded.
13. *Other Sources.* Includes all revenues not otherwise categorized. Examples are interest income from temporary investments and the sales of internal service departments to external users (for example, the sale of computer time to local businesses).
14. *Independent Operations.* Includes all revenues unrelated to or independent of the primary missions of the institution (instruction, research, public

service). An example is the income of Federally Funded Research and Development Centers. This category does not include the net profit from operations owned as investments of the institution's endowment funds.

15. *Transfers In.* Includes all funds transferred to the Current Funds group from another fund group. Examples are expired term endowments, terminated annuity agreements, and redesignated funds.

Each of these revenue categories identifies a *source* of revenue (local, state, or federal governments; students; other fund groups; private funders) and/or a *type* of revenue (appropriations, grants and contracts, fees, sales, or earned income). Within each revenue category, funds may be restricted or unrestricted. They allow the institution to monitor important sources and types of revenue. These revenue categories have been endorsed by the National Association of College and University Business Officers (NACUBO), the American Institute of Certified Public Accountants (AICPA), and the National Center for Higher Education Management Systems (NCHEMS) as national standards for financial reporting and as part of generally accepted accounting principles. For the full definitions of these categories, see chapter 5 of the *Higher Education Finance Manual: Data Providers' Guide.*

Expenditures are generally reported *by use.* Use is defined in terms of the functions (for example, instruction) of the institution. NACUBO, AICPA, and NCHEMS endorse functional reporting as part of generally accepted accounting principles, to further the principle of disclosure and to aid in the use of financial accounting information for planning and management functions. A structure based on organizational units would be unique to a particular institution, while one based on object of expenditure (for example, salaries, travel, and equipment) does not provide information related to the purposes of an institution (that is, instruction, research, public service). Functions, on the other hand, provide a certain universality and are related to the ultimate purposes of an institution. The recommended set of functional expenditure categories includes:

1. *Instruction.* Includes all funds expended for credit and noncredit courses for academic, vocational, and remedial purposes in regular, special, and extension sessions. Expenditures for departmental research and public service that are not separately budgeted are also included. This category includes subcategories for General Academic Instruction, Vocational/Technical Instruction, Special Session Instruction, Community Education, and Preparatory/Remedial Instruction.
2. *Research.* Includes all expenditures for activities specifically organized to produce research outcomes. This category includes subcategories for Institutes and Research Centers and Individual and Project Research.

3. *Public Service.* Includes expenditures for activities established primarily to provide noninstructional services beneficial to individuals outside the institution. This category includes subcategories for Community Service, Cooperative Extension Service, and Public Broadcasting Services.
4. *Academic Support.* Includes funds expended primarily to provide support services for the institution's primary missions—instruction, research, and public service. This category includes subcategories for Libraries, Museums and Galleries, Educational Media Services, Academic Computing Support, Ancillary Support, Academic Administration, Academic Personnel Development, and Course and Curriculum Development.
5. *Student Services.* Includes funds for the Office of Admissions and Records and those activities whose primary purpose is to contribute to the student's intellectual, cultural, and social development outside the context of the formal instruction program. This category includes subcategories for Student Services Administration, Social and Cultural Development, Counseling and Career Guidance, Financial Aid Administration, Student Admissions, Student Records, and Student Health Services.
6. *Institutional Support.* Includes expenditures for those activities carried out to provide for both the day-to-day functioning and the long-range viability of the institution as an operating institution, exclusive of physical-plant operations. This category includes subcategories for Executive Management, Fiscal Operations, General Administration and Logistical Services, Administrative Computing Support, and Public Relations/Development.
7. *Operation and Maintenance of Plant.* Includes all expenditures of current operating funds for the operation and maintenance of the physical plant, net of amounts charged to Auxiliary Enterprises, Hospitals, and/or Independent Operations. This category includes subcategories for Physical Plant Administration, Building Maintenance, Custodial Services, Utilities, Landscape and Grounds Maintenance, and Major Repairs and Renovations.
8. *Scholarships and Fellowships.* Includes expenditures made in the form of outright grants to students selected by the institution and financed by current funds. This category includes subcategories for Scholarships (undergraduate awards) and Fellowships (graduate awards).
9. *Mandatory Transfers.* Includes transfers from the Current Funds group to other fund groups arising out of binding legal agreements related to the financing of educational plant and/or grant agreements that require matching funds. This category includes subcategories for Provision for Debt Service on Educational Plant, Loan Fund Matching Grants, and Other Mandatory Transfers.
10. *Nonmandatory Transfers.* Includes those transfers from the Current Funds group to other fund groups made at the discretion of the governing board.

11. *Auxiliary Enterprises.* Includes expenditures and transfers associated with the operation of auxiliary enterprises. An auxiliary enterprise is an entity that exists to furnish goods or services to students and that charges a fee directly related to, though not necessarily equal to, the cost of the goods or services. This category includes subcategories for Auxiliary Enterprises—Student; Auxiliary Enterprises—Faculty/Staff; Intercollegiate Athletics; and Mandatory Transfers/Auxiliary Enterprises.
12. *Hospitals.* Includes all expenditures and transfers associated with the patient-care operations of a university-operated hospital. Expenditures for those activities that take place within the hospital but are more appropriately classified as instruction or research are excluded. This category includes subcategories for Direct Patient Care, Health Care Supportive Services, Administration of Hospitals, Physical Plant Operations for Hospitals, and Mandatory Transfers/Hospitals.
13. *Independent Operations.* Includes expenditures and transfers of those operations independent of, or unrelated to (but that may enhance), the primary missions of the institution. This category includes subcategories for Independent Operations/Institutional and Independent Operations/Federally Funded Research and Development Centers.

The definitions for revenue and expenditure categories described in this chapter are summaries only. For the full definitions and for definitions of expenditure categories, the reader should refer to the *Higher Education Finance Manual: Data Providers' Guide*, chapter 6.

2

The Balance Sheet

Description

The Balance Sheet describes the institution's financial position at a particular point in time, usually the end of a fiscal period. The financial position of the institution, as shown in the Balance Sheet, is a "snapshot" of the institution's resource levels. It does not show the flow of revenues and expenditures. It shows the assets and liabilities of the institution and serves the same basic purpose as Balance Sheets used in the corporate sector. Information regarding the balance between assets and liabilities can indicate the financial strengths and weaknesses of an institution.

Because an institution of postsecondary education is required to maintain fiduciary responsibility to many funders who have placed different kinds and levels of requirements on the use of funds, each self-balancing fund has balance-sheet information prepared for it. For financial reporting, these funds are aggregated into the fund groups described in chapter 1 (Current Funds, Loan Funds, Endowment and Similar Funds, Annuity and Life Income Funds, Plant Funds, and Agency Funds) and reported on a single Balance Sheet for the institution.

Format

Two basic formats are commonly used in preparing balance sheets for postsecondary-education institutions—the layered Balance Sheet and the columnar Balance Sheet.

FIGURE 1

LAYERED BALANCE SHEET

June 30, 19__

with comparative figures at June 30, 19__

Assets

Current Funds

	Current Year	Prior Year
Unrestricted		
Cash	$ 210,000	$ 110,000
Investments	450,000	360,000
Accounts receivable, less allowance of $18,000 both years	228,000	175,000
Inventories, at lower of cost (first-in, first-out basis) or market	90,000	80,000
Prepaid expenses and deferred charges	28,000	20,000
Total unrestricted	1,006,000	745,000
Restricted		
Cash	145,000	101,000
Investments	175,000	165,000
Accounts receivable, less allowance of $8,000 both years	68,000	160,000
Unbilled charges	72,000	—
Total restricted	460,000	426,000
Total current funds	1,466,000	1,171,000

Loan Funds

	Current Year	Prior Year
Cash	30,000	20,000
Investments	100,000	100,000
Loans to students, faculty, and staff, less allowance of $10,000 current year and $9,000 prior year	550,000	382,000
Due from unrestricted funds	3,000	—
Total loan funds	683,000	502,000

Endowment and Similar Funds

	Current Year	Prior Year
Cash	100,000	101,000
Investments	13,900,000	11,800,000
Total endowment and similar funds	14,000,000	11,901,000

Liabilities and Fund Balances

Current Funds

	Current Year	Prior Year
Unrestricted		
Accounts payable	$ 125,000	$ 100,000
Accrued liabilities	20,000	15,000
Students' deposits	30,000	35,000
Due to other funds	158,000	120,000
Deferred credits	30,000	20,000
Fund balance	643,000	455,000
Total unrestricted	1,006,000	745,000
Restricted		
Accounts payable	14,000	5,000
Fund balances	446,000	421,000
Total restricted	460,000	426,000
Total current funds	1,466,000	1,171,000

Loan Funds

	Current Year	Prior Year
Fund balances		
U.S. government grants refundable	50,000	33,000
University funds		
Restricted	483,000	369,000
Unrestricted	150,000	100,000
Total loan funds	683,000	502,000

Endowment and Similar Funds

	Current Year	Prior Year
Fund balances		
Endowment	7,800,000	6,740,000
Term endowment	3,840,000	3,420,000
Quasi-endowment—unrestricted	1,000,000	800,000
Quasi-endowment—restricted	1,360,000	941,000
Total endowment and similar funds	14,000,000	11,901,000

Annuity and Life Income Funds

Annuity funds		
Cash	$ 55,000	$ 45,000
Investments	3,260,000	3,010,000
Total annuity funds	3,315,000	3,055,000
Life income funds		
Cash	15,000	15,000
Investments	2,045,000	1,740,000
Total life income funds	2,060,000	1,755,000
Total annuity and life income funds	5,375,000	4,810,000

Plant Funds

Unexpended		
Cash	275,000	410,000
Investments	1,285,000	1,590,000
Due from unrestricted current funds	150,000	120,000
Total unexpended	1,710,000	2,120,000
Renewals and replacements		
Cash	5,000	4,000
Investments	150,000	286,000
Deposits with trustees	100,000	90,000
Due from unrestricted current funds	5,000	—
Total renewals and replacements	260,000	380,000
Retirement of indebtedness		
Cash	50,000	40,000
Deposits with trustees	250,000	253,000
Total retirement of indebtedness	300,000	293,000
Investment in plant		
Land	500,000	500,000
Land improvements	1,000,000	1,110,000
Buildings	25,000,000	24,060,000
Equipment	15,000,000	14,200,000
Library books	100,000	80,000
Total investment in plant	41,600,000	39,950,000
Total plant funds	43,870,000	42,743,000

Agency Funds

Cash	50,000	70,000
Investments	60,000	20,000
Total agency funds	110,000	90,000

Annuity and Life Income Funds

Annuity funds		
Annuities payable	$ 2,150,000	$ 2,300,000
Fund balances	1,165,000	755,000
Total annuity funds	3,315,000	3,055,000
Life income funds		
Income payable	5,000	5,000
Fund balances	2,055,000	1,750,000
Total life income funds	2,060,000	1,755,000
Total annuity and life income funds	5,375,000	4,810,000

Plant Funds

Unexpended		
Accounts payable	10,000	—
Notes payable	100,000	—
Bonds payable	400,000	—
Fund balances		
Restricted	1,000,000	1,860,000
Unrestricted	200,000	260,000
Total unexpended	1,710,000	2,120,000
Renewals and replacements		
Fund balances		
Restricted	25,000	180,000
Unrestricted	235,000	200,000
Total renewals and replacements	260,000	380,000
Retirement of indebtedness		
Fund balances		
Restricted	185,000	125,000
Unrestricted	115,000	168,000
Total retirement of indebtedness	300,000	293,000
Investment in plant		
Notes payable	790,000	810,000
Bonds payable	2,200,000	2,400,000
Mortgages payable	400,000	200,000
Net investment in plant	38,210,000	36,540,000
Total investment in plant	41,600,000	39,950,000
Total plant funds	43,870,000	42,743,000

Agency Funds

Deposits held in custody for others	110,000	90,000
Total agency funds	110,000	90,000

SOURCE: *Administrative Service,* section 5:7 (Washington, D.C.: NACUBO, 1974), pp. 2-3.

The *layered Balance Sheet* comprises a series of mini-balance sheets, one for each major fund group, displayed in a series of succeeding layers (see figure 1). Each layer is a self-balancing statement of the assets, liabilities, and fund balance for that particular fund group, and this series of mini-balance sheets constitutes the institutional Balance Sheet.

One of the advantages of the layered Balance Sheet, as seen in figure 1, is that it usually is prepared with the prior year's figure for each item displayed adjacent to the current year's figure. For purposes of planning and management, this format provides the user with easily obtainable trend data for every item shown on the Balance Sheet. Layered Balance Sheets can be prepared showing comparative data for each item for more than two years, or a comparison of a series of layered Balance Sheets prepared for successive years can be conducted to show even longer-term trends. The primary advantage of the layered format for the Balance Sheet is that it tends to focus the user's attention more directly on individual fund groups, emphasizes the intended and the legally restricted uses of the institution's resources, and enables the institution to show substantial detail about types of assets, liabilities, and fund balances for each fund group. It is, however, sometimes difficult to get a total institutional picture using the layered format.

The *columnar Balance Sheet* (see figure 2) displays in separate columns for each fund group the same figures for the institution's assets, liabilities, and fund balances as are shown in the layered format in figure 1.

Since the columnar Balance Sheet displays assets, liabilities, and fund balances across the various fund groups, it provides the user with a better total institutional picture than the layered Balance Sheet. The columnar format allows the user to look at a particular item (for example, cash) and see immediately where the item is accounted for among the various fund groups. This focuses the user's attention on the distribution of assets and liabilities among the various fund groups in addition to focusing attention on the extent and the degree of the restrictions placed upon their use.

One of the potential limitations of the columnar Balance Sheet is that it sometimes leads users to derive totals for the various items of assets, liabilities, and fund balances. Although the derivation of totals can be meaningful for certain items when properly used and understood, improper use can lead to invalid and misleading conclusions. For example, while users might want to derive a figure on the columnar Balance Sheet for total cash, they should *not* assume that this figure shows the total cash available for any use. In fact, if this figure is to be meaningful, the user must focus on how the cash is distributed among the various fund groups (that is, what is its intended use) and whether the cash is restricted or unrestricted within each fund group (that is, can its intended use be changed). Failure to look at these aspects of the institution's cash position will result in an invalid understanding of the information shown on the Balance Sheet.

FIGURE 2

COLUMNAR BALANCE SHEET

June 30, 19___

(In Thousands of Dollars)	Current Funds		Loan Funds	Endowment and Similar Funds	Annuity and Life Income Funds	Plant Funds			
	Unrestricted	Restricted				Unexpended	Renewal and Replacement	Retirement of Indebtedness	Investment in Plant
Assets									
Cash	210	145	30	100	70	275	5	50	
Investments	450	175	100	13,900	5,305	1,285	150		
Accounts Receivable	228	68							
Inventories, Prepaid Expenses, etc.	118	72							
Notes Receivable			550						
Institutional Plant									41,600
Interfund Borrowing—Due From			3			150	5		
Deposits with Trustees							100	250	
Total Assets	1,006	460	683	14,000	5,375	1,710	260	300	41,600
Liabilities									
Accounts Payable and Accrued Liability	145	14				10			
Student Deposits	30								
Deferred Revenues	30								
Notes Payable						100			790
Contracts Payable					2,155				
Mortgages Payable									400
Bonds Payable						400			
Interfund Borrowing—Due To	158								2,200
Total Liabilities	363	14			2,155	510			3,390
Fund Balances									
For Current Operations—Unrestricted	643								
For Current Operations—Restricted		446							
Board Designated Funds			150	1,000		200	235	115	
Restricted to Other Than Current Purposes			533	13,000	3,220	1,000	25	185	
Net Investment in Institutional Plant									38,210
Total Fund Balances	643	446	683	14,000	3,220	1,200	260	300	38,210
Total Liabilities and Fund Balances	1,006	460	683	14,000	5,375	1,710	260	300	41,600

NOTE: There are many possible formats for a columnar balance sheet, of which this is one. The figures shown here are consistent with those in figure 1, although the categories are slightly different.

The columnar Balance Sheet displays fund balances differently from what is shown on the layered Balance Sheet. The columnar Balance Sheet groups similar fund balances as one item and distributes each type of fund balance across the various fund groups. However, the actual fund balances for each fund group are the same in both types of balance-sheet formats.

Definitions

The following terms are used in the Balance Sheet:

1. Assets
   a. *Cash.* Includes the cash on hand, petty cash, and cash in the bank accounts associated with each fund group.
   b. *Investments.* Includes marketable securities, real estate, patents, copyrights, royalties, participations, and so forth. Investments purchased are reported in the financial statements at cost and investments received as gifts are reported at the fair market or appraised value at the date of gift, unless there has been an impairment of value not considered to be temporary. As a permissible alternative, investments, exclusive of physical plant, may be reported in the financial statements at current market value or fair value, provided this basis is used for all investments of all funds. (The financial report will state which of these methods is being used.) If the institution reports investments on the Balance Sheet at cost, information should be included to show market value. Investments may be categorized further in a financial report as securities, real estate, and other investments.
      - Securities—includes bonds, notes, preferred stocks, and common stocks.
      - Real Estate—includes real property in which funds are invested to produce income (usually as part of the Endowment Fund). Such properties may be acquired by gift, purchase, or foreclosure of mortgage notes.
   c. *Pledges Receivable.* Pledges may be reported in the Balance Sheet as a receivable, if of material amount, and if an estimated net realizable value for such pledges can be computed. Pledges of gifts, including uncollected subscriptions, subscription notes, and estate notes, will be disclosed in the notes to the financial report unless they are reported in the financial statements themselves. The notes to the financial statements will disclose the gross amounts by time periods over which the pledges are to be collected and related restrictions, if any, as to use. (NOTE: The example Balance Sheets, figures 1 and 2, do not show any pledges receivable.)

d. *Accounts Receivable.* Includes all amounts owed to the institution for completed sales of goods and services. Governmental appropriations that are subject to release by a governmental officer for institutional use should be shown here and not under cash. Accounts receivable are shown at face value less an allowance for doubtful accounts.

e. *Notes Receivable.* Includes all amounts owed on promissory notes, including student loans, from debtors. Notes receivable for loans should be carried in the Loan Funds group at face value less allowance for doubtful loans. Provision for doubtful loans should be charged to the equity account of the specific loan fund.

f. *Inventories.* Merchandise for sale, including supplies and stocks in stores. Examples of the latter are office supplies, fuel, building supplies, and goods not yet charged as expense but carried in stock in general storerooms for future requisition or sale. Inventories are not charged as expense until used. Merchandise for sale includes such items as inventories of student stores, university presses, and food services.

g. *Prepaid Expenses and Deferred Charges.* Includes that portion of operating expenditures properly chargeable in a period subsequent to the date of the Balance Sheet.

h. *Institutional Plant.* The physical property owned by an institution and used for institutional purposes, such as land, buildings, improvements other than buildings, equipment, and library books. These subcategories are broken out separately in figure 1 (the layered Balance Sheet) and combined in figure 2 (the columnar Balance Sheet).

i. *Interfund Borrowing Due from Other Funds.* Includes the amounts of funds loaned temporarily between fund groups (for example, unrestricted Current Funds loaned to the Plant Fund).

j. *Deposits with Trustees.* Includes monies on deposit with trustees under bond indentures for the retirement of indebtedness.

2. Liabilities

a. *Accounts Payable and Accrued Liabilities.* Includes liabilities for goods received and other expenses incurred for which payments have not been made as of the date of the financial statement. Salaries and wages earned and unpaid are included in this category in the Current Fund. Amounts deducted from payrolls and not yet forwarded to proper agencies, such as income taxes withheld, social security taxes, and retirement annuity premiums, are shown here.

b. *Notes, Bonds, and Mortgages Payable.* Represents liabilities for outstanding notes, bonds, and mortgages issued or incurred by the institution.

c. *Deposits.* Includes receipts for various purposes that an institution may be required to repay in whole or in part. Examples are deposits for breakage, room-rental contracts, keys, library books, and reservations for admission to the institution or to the residence halls.

d. *Deferred Revenues/Credits.* Includes payments made to the institution in advance of the reporting period to which they apply for services to be rendered in a subsequent reporting period. Examples are tuition, fees, and room rentals paid in advance of the fiscal period to which they apply.

e. *Contracts Payable.* Includes payments that the institution is required to make on existing contracts. Specifically included is the present value, based upon acceptable life-expectancy tables of the aggregate liability for annuities payable in the Annuity Funds group and income payable in the Life Income Funds group. When a gift is received in the Annuity Funds group, the present value of the annuities payable is credited to the liability account and the remainder to the fund balance. Periodically, an adjustment is made between the liability and the fund balance to reflect the recomputation of the liability based on the revised life expectancy. Any such adjustments should be shown separately.

f. *Interfund Borrowing Due to Other Funds.* Represents the amounts of funds loaned temporarily between fund groups (for example, unrestricted Current Funds loaned to the Plant Fund). Except for temporary advances, usually up to one year, the terms of borrowing and repayments should be disclosed.

3. Fund Balances

a. *Unrestricted Current Funds Balance.* The unrestricted fund balance in the Current Fund represents the net accumulation of unrestricted Current Funds revenues over Current Funds expenditures and transfers. This amount is available for future operating purposes or for any other use approved by the governing board of the institution.

b. *Restricted Current Funds Balance.* Represents the unexpended balances of funds restricted by donors or outside agencies to specific current operating purposes. These funds originate from income or restricted endowment funds, gifts from donors who have placed limitations on their use, and grants from private or governmental sources specifically for research, training, and so forth. This item on the Balance Sheet consists of those restricted funds available for expenditure in future reporting periods.

c. *Loan Funds Balance.* Represents the balance of those funds available for loans to students, faculty, and staff. The fund-balance section should display separately the unrestricted and restricted portions of the Loan Funds balance. The only unrestricted funds in the Loan Funds are those unrestricted funds designated by the governing board to function as loan funds. Since action of the governing board at some future date may require that designated funds be returned to the Current Fund or transferred to another fund group, the unrestricted fund balance should be shown separately from the restricted fund balance.

d. *Endowment and Similar Funds Balance.* Separate fund balances should be identified for endowment funds, term endowment funds, and quasi-endowment funds. The fund balance of quasi-endowment funds usually is considered to be unrestricted, in that it may be transferred between fund groups. However, it is possible for the income from quasi-endowment funds to be restricted by function or organizational unit, even though the principal may be expendable. For example, an institution may receive a gift to be used to benefit the Law School. Rather than expend the funds in one year, the governing board may decide to establish a quasi-endowment fund with the income to be used in the Law School. At some later date, the governing board could then decide to expend some of the principal of the quasi-endowment fund, but it would still have to be spent for some purpose of the Law School. The balance of term endowment funds cannot be transferred out of this fund group until the agreed upon time period expires or a specified event takes place. At such a time, it may be transferred out of the Endowment and Similar Funds group. The income of term endowment funds also may be either restricted or unrestricted as to function or organizational unit.

e. *Annuity Funds Balance.* A fund balance will exist in the Annuity Funds group whenever there is an excess of assets over liabilities (which must include an actuarial liability for annuities payable). All fund balances of the Annuity Funds should be considered restricted to that fund group until the terms of the annuity agreement are met and the resources can be transferred to another fund group.

f. *Life Income Funds Balance.* A fund balance will exist whenever there is an excess of assets over liabilities. All fund balances of Life Income Funds should be considered restricted to that fund group until the terms of the life-income agreement are met and the resources can be transferred to another fund group.

g. *Unexpended Plant Funds.* Fund balances of this Plant Funds subgroup represent those unexpended resources that have been set aside for the purpose or construction of physical plant, in excess of any associated liabilities. Restricted Plant Funds balances are shown separately from those unrestricted fund balances that have been designated for plant purposes by the governing board.

h. *Funds for Renewal and Replacement.* Fund balances of this Plant Funds subgroup represent unexpended resources held for the renewal and replacement of physical plant. The fund balance is usually subdivided between unrestricted resources designated by the governing board for replacement purposes and resources restricted by funders to such purposes, including fund balances arising from agreements with outside agencies, such as trustees under bond indentures and restricted gifts, grants, and governmental appropriations.

i. *Funds for Retirement of Indebtedness.* Fund balances of this Plant Funds subgroup represent those resources held for the retirement of, and the payment of interest on, the debt owed on the institution's physical plant. It includes sinking funds established under bond indentures, mortgage amortization payments accumulated but not yet due, and other resources accumulated for interest and debt retirement. Fund balances are usually subdivided between those unrestricted resources designated by the governing board for debt-retirement purposes and restricted resources.

j. *Net Investment in Plant.* The net investment in plant is the total of the institutional equity in physical-plant assets. It is, in short, the institution's "paid for" plant facilities. This figure is usually calculated on the basis of the original cost of the plant.

k. *For Current Operations—Unrestricted; For Current Operations—Restricted.* These two items represent that portion of the excess of assets over liabilities in the Current Fund available for the support of the current operations of the institution.

l. *Board Designated Funds.* Includes all unrestricted fund balances (other than those in the Current Fund) and therefore represents that portion of the institution's fund balances designated by the institution's governing board for use in those fund groups.

m. *Restricted to Other than Current Operations.* Includes all fund balances that have been restricted by the donors for purposes other than the support of current operations.

Statement Uses and Limitations

The value of the Balance Sheet for information purposes is most apparent when the user can look at a series of Balance Sheets for successive years. Such trend information can be more valuable than any particular item on the Balance Sheet for any one year. In most instances, the Balance Sheet will be used along with other institutional financial statements. However, there are certain questions that can be answered using primarily Balance Sheet data.

1. What is the extent of those institutional resources available *only* for current operations in succeeding operating periods?

   Answer: The category *For Current Funds—Restricted* includes those resources available in succeeding operating periods for certain specific current operations. However, this does not mean that all of these resources are available in the *next* operating period. Restrictions may have been placed upon a portion of these resources that stipulate that they be used over a period of two or more years. The category *For Current Operations—Unrestricted* also includes resources available for current operations. Also, *Board Designated*

Funds in any fund group may be available, since the governing board can make the determination as to the use of these funds.

2. What portion of the institution's unrestricted resources has been designated by the institution's governing board for specific purposes? For what purposes were these resources designated?

   Answer: The answer to this question can be found by looking at the fund-balances item *Board Designated Funds* on the columnar Balance Sheet. Generally, the unrestricted fund balances of all fund groups except the Current Fund also may be considered designated funds. The specific purpose for which the funds have been designated is indicated by the fund group in which they are reported. Theoretically, all designated funds can be redesignated by the governing board, if necessary, for use in the Current Fund or in any other fund group. In those cases where the designation is an investment of funds, such as a designation to Endowment and Similar Funds, this ability to redesignate funds is true in a practical sense as well. However, if the funds have been designated for a specific use, such as the payment of debt in the Plant Fund, the funds will not necessarily be available in any practical sense for redesignation to another fund group.

3. What is the extent of those institutional funds restricted to uses other than current operations? For what purposes are they restricted?

   Answer: The category *Restricted to Other Than Current Purposes* on the columnar Balance Sheet shows those institutional resources whose uses have been restricted by the donors. The fund-group columns in which such resources are reported indicate the type of overall-goal restriction placed upon them. In the layered Balance Sheet, the restricted fund balance of each fund group represents funds that have been restricted by the donor for use in that fund group.

4. What is the institution's liquidity position (that is, how easily could the institution liquidate its short-term assets if it became necessary to do so in order to cover short-term liabilities)?

   Answer: This question is not easy to answer in postsecondary education because of the restrictions placed upon many of the institution's resources. Although certain assets might be short-term in the sense that they can be converted to cash within a year (the usual definition of liquidity), the proceeds resulting from any such conversion may be restricted to a specific use and not available to meet the particular short-term liabilities that need to be covered. Therefore although an estimate of liquidity can be found by comparing such typical short-term assets as cash, short-term investments, and accounts receivable to such short-term liabilities as accounts payable and student deposits, the restricted nature of some of those assets must be analyzed as they relate to particular liabilities before any meaningful measure of liquidity can be determined.

5. What is the extent and the nature of the institution's long-term debt?
Answer: The answer to this question can be found by looking at categories such as Notes Payable, Contracts Payable, Mortgages Payable, and Bonds Payable. The nature of the various amounts of debt is shown by the particular fund group in which each portion of the total is reported. However, a more detailed analysis of the specifics of the institution's borrowings is needed to fully understand the nature and the extent of the institution's debt. The specifics of these borrowings usually can be found in the notes to the institution's financial reports.

Questions also can be answered about the amount of pledges receivable and the size of the endowment relative to current operating funds, using the Balance Sheet. As described earlier, the Balance Sheet ordinarily is used in conjunction with other institutional financial statements rather than alone, and many questions will not be as simple and straightforward as those described above. However, the answers to most questions, even the more complex ones, will require the same basic information elements described in the answers above, and through experience, the user will begin to learn how those elements can be used to answer the tougher questions posed in most situations.

3

Statement of Changes in Fund Balances

Description

The Statement of Changes in Fund Balances is intended to show the overall flow of funds into and out of the institution and among the institution's fund groups. It answers questions about the source and use of funds and the management and preservation of resources. Unlike the Balance Sheet, the Statement of Changes in Fund Balances describes the financial *activity* of the institution over the entire course of a fiscal period. The Statement of Changes in Fund Balances thus displays additions, deductions, and transfers rather than assets and liabilities.

Like all postsecondary-education financial statements, the Statement of Changes in Fund Balances is based on the individual funds established by the institution to maintain fiduciary controls over its various sources of financing. For reporting purposes, these funds are aggregated into the normal fund groups (Current Funds, Loan Funds, Endowment and Similar Funds, Annuity and Life Income Funds, and Plant Funds). Each fund group is usually displayed as a column(s) on the institutional Statement of Changes in Fund Balances. The fund groups internally balance in the reports. Agency Funds are generally not shown on the Statement of Changes in Fund Balances.

Sample Educational Institution

FIGURE 3

Statement Of Changes In Fund Balances

Year Ended June 30, 19___

			Current Funds					Plant Funds			
(Figures in Thousands of Dollars)			Unrestricted	Restricted	Loan Funds	Endowment and Similar Funds	Annuity and Life Income Funds	Unexpended	Renewal and Replacement	Retirement of Indebtedness	Investment in Plant
Additions	Tuition and Fees		2,600								
Additions	Governmental Appropriations	Local									
Additions	Governmental Appropriations	State	1,300					50			
Additions	Governmental Appropriations	Federal									
Additions	Governmental Grants and Contracts	Local									
Additions	Governmental Grants and Contracts	State									
Additions	Governmental Grants and Contracts	Federal	35	500							
Additions	Private Gifts, Grants, and Contracts		850	370	100	1,500	800	115		65	15
Additions	Investment Income	Unrestricted	325								
Additions	Investment Income	Restricted		224	12	10		5	5	5	
Additions	Net Realized Gains on Sales of Investments	Unrestricted				109					
Additions	Net Realized Gains on Sales of Investments	Restricted			4	50		10	5	5	
Additions	Sales and Services of Auxiliary Enterprises		2,200								
Additions	Sales and Services of Educational Activities		190								
Additions	Other (Itemize if material)	Additions to Plant Facilities									1,550
Additions	Other (Itemize if material)	Retirement of Indebtedness									220
Additions	Other (Itemize if material)	Other	40		25	10		50		3	
Total Additions			7,540	1,094	141	1,679	800	230	10	78	1,785
Deductions	Current Fund Expenditures	Educational and General	4,400	1,014							
Deductions	Current Fund Expenditures	Noneducational and General (including Auxiliary Enterprises)	1,830								
Deductions	Loan Cancellations and Write-Offs				1						
Deductions	Expended for Plant Facilities							1,200	300		
Deductions	Debt Service	Principal								220	
Deductions	Debt Service	Interest								190	
Deductions	Other (itemize if material)	Expired Term Endowment				90					
Deductions	Other (itemize if material)	Disposal of Plant Facilities									115
Deductions	Other (itemize if material)	Other		55	11		85			1	
Total Deductions			6,230	1,069	12	90	85	1,200	300	411	115
Transfers	Mandatory Transfers Into/(Out of)	Debt Service	(340)							340	
Transfers	Mandatory Transfers Into/(Out of)	Renewal and Replacement	(170)						170		
Transfers	Mandatory Transfers Into/(Out of)	Loan Fund Matching Grant	(2)		2						
Transfers	Mandatory Transfers Into/(Out of)	Other (itemize if material)									
Transfers	Nonmandatory Transfers Into/(Out of)	Distribution of Capital Gains	40			(40)					
Transfers	Nonmandatory Transfers Into/(Out of)	Designation of Unrestricted Funds	(650)		50	550		50			
Transfers	Nonmandatory Transfers Into/(Out of)	Other (itemize if material)									
Total Transfers Into/(Out of)			(1,122)		52	510		50	170	340	
Net Increase/(Decrease) for the Year			188	25	181	2,099	715	(920)	(120)	7	1,670
Fund Balance—Beginning of Year			455	421	502	11,901	2,505	2,120	380	293	36,540
Fund Balance—End of Year			643	446	683	14,000	3,220	1,200	260	300	38,210

NOTE: There are several possible formats for a Statement of Changes in Fund Balances. Another format is shown in section 5:7 of *Administrative Service* (Washington, D.C.: NACUBO, 1974), pp. 4-5. Although the formats vary, the amounts shown in this illustration are identical to those in *Administrative Service*.

Format

For each fund group, and for subgroups in many cases, the Statement of Changes in Fund Balances shows additions, deductions, transfers, net changes, and beginning and ending fund balances (see figure 3).

Definitions

The following terms are used in the Statement of Changes in Fund Balances:

1. *Additions.* Applies to monies added to a fund group during the reporting period, including additions to the Current Fund, whether reported as revenues or not. The terms *additions* and *revenues* are distinct and have quite different meanings in fund accounting. The term *revenues* generally is applied only to the Current Fund and includes (1) all unrestricted monies received for the Current Fund during the reporting period and (2) that portion of restricted funds expended during the reporting period. Therefore for unrestricted Current Funds, additions and revenues are the same; for restricted Current Funds, they are different.

   The definitions described below for the *Additions* categories of the Statement of Changes in Fund Balances are similar to the definitions given in the next chapter for Current Fund revenues. *While they appear to be the same, the terms are different when applied to restricted funds in the Current Fund.*

   a. *Tuition and Fees.* Includes all tuition and fees assessed (net of refunds) against students for educational purposes. Charges for room, board, and other services rendered by auxiliary enterprises are not included in this category but are shown as Sales and Services of Auxiliary Enterprises.
   b. *Governmental Appropriations.* Includes those funds received from or made available for current operations by governmental sources through legislative acts. It includes governmental appropriations made from tax funds and federal revenue-sharing funds and does not include institutional fees and other income reappropriated by the legislature to the institution. Such amounts should be deducted from this category and reported in the appropriate categories.
   c. *Governmental Grants and Contracts.* Includes funds received from or made available by government agencies for specific projects or programs, including student aid. Examples are research projects, training programs, training and instructional institutes, and similar activities for which financial support is received under the terms of a governmental grant or contract.

48

d. *Private Gifts, Grants, and Contracts.* Includes all amounts received from individuals or nongovernmental organizations. It also includes those monies resulting from the purchase of goods or services by individuals or nongovernmental agencies from the institution on a contractual basis, exclusive of those normally classified as the sales of various educational or support departments.

e. *Investment Income.* Includes (1) unrestricted income of Endowment and Similar Funds; (2) restricted income of Endowment and Similar Funds, whether or not the income is expended during the reporting period; and (3) income from funds held in trust by others under irrevocable trusts. This category does not include the net capital gains resulting from the sale of investments (which would be included in Net Realized Gains on Sale of Investments), nor does it include any portion of the gain on investments used for current operations under the total-return concept (see chapter 8 of *HEFM: Data Providers' Guide* for a discussion of total return).

f. *Net Realized Gains on the Sale of Investments.* Includes all net additions to particular fund groups resulting from the sale of the assets of the fund group for an amount greater than the carrying value of those assets (either cost or fair market value). Net losses should be shown as deductions.

g. *Sales and Services of Educational Activities.* Includes all funds derived from the sale of goods or services that are produced incidental to the conduct of instruction, research, or public service. For reporting purposes, the type of service takes precedence over the form of the agreement by which those services are rendered. Therefore the incidental revenues of educational departments would be included in this category, even if they should be performed under contract. For example, an experiment-station creamery may have a contract to deliver milk to a local school. But since the milk is produced incidentally to research activities, this would be sales and service. Monies derived from the sale of goods and services by auxiliary enterprises and hospitals would not be included in this category.

h. *Sales and Services of Auxiliary Enterprises.* Includes all monies generated by the auxiliary operations of the institution. An auxiliary enterprise is an entity that exists to furnish goods or services to students, faculty, or staff and that charges a fee directly related to, although not necessarily equal to, the cost of the service. The general public may be served incidentally by some auxiliary enterprises. Auxiliary enterprises generally include residence halls, food services, intercollegiate athletics (if operated as an essentially self-supporting operation), college stores and unions, and so forth.

i. *Sales and Services of Hospitals.* Includes all funds directly attributable to the operation of the hospital. It does not therefore include those funds derived from grants, gifts, appropriations, or endowment income restricted for hospital operations.

j. *Other.* Includes all other additions to fund groups not included in one of the categories described above. Additions that are of material proportions should be itemized. This category also includes earnings on the short-term investments of the Current Fund.

2. *Deductions.* Includes all funds flowing *out* of any of the fund groups during the reporting period, except those funds leaving a fund group as the result of a transfer of funds.

a. *Current Fund Expenditures.* Includes all expenditures from both the unrestricted Current Fund and the restricted Current Fund. A more detailed breakdown of this figure is shown in the Statement of Current Funds Revenues, Expenditures, and Other Changes.

b. *Loan Cancellations and Write-Offs.* Includes those amounts deducted from the Loan Fund to provide for uncollectible loans.

c. *Expended for Plant Facilities.* Includes disbursements made from the Plant Fund—Unexpended subgroup for newly acquired or constructed plant facilities, as well as disbursements from the Plant Fund—Renewal and Replacement subgroup for renovations of existing plant.

d. *Debt Service.* Includes all deductions from the Plant Fund—Retirement of Indebtedness subgroup for the purpose of servicing the institution's debt on its physical plant. Physical-plant obligations are generally the only type of long-term debt most institutions have, although some short-term debt also might be incurred in order to meet current operating needs. (This category does not include transfers made from one fund group for the purposes of satisfying debt requirements in another group —these would be included in the *Transfers* section.)

e. *Other.* Includes all other deductions from fund groups not included in one of the categories described above. Any deductions that are material should be itemized. Examples include the disposal of physical facilities (a deduction from the Investment in Plant subgroup) and administrative and collection costs in the Loan Fund.

3. *Transfers.* Includes all flows of funds *among* the various fund groups during the reporting period. Transfers are self-balancing across the columns of the Statement of Changes in Fund Balances. In other words, every transfer results in an equal addition (shown as a positive figure in the receiving fund-group column) and deduction (shown as a negative figure in parentheses in the donor fund-group column). The net result always will be zero.

a. *Mandatory Transfers.* Includes all transfers made to fulfill a binding legal obligation of the institution.
- Debt Service—includes all mandatory provisions made to satisfy debt obligations on academic buildings and auxiliary-enterprise operations.
- Renewal and Replacement—includes all mandatory provisions made for the renovation of institutional plant.
- Loan Fund Matching Grant—includes all mandatory transfers of institutional funds to the Loan Fund as required in order to match outside gifts or grants, usually from the U.S. government, for loan purposes.
- Other Mandatory Transfers—includes all mandatory transfers not included in one of the above categories. Other mandatory transfers that are material should be itemized.

b. *Nonmandatory Transfers.* Includes all transfers made from one fund group to another at the discretion of the institution's governing board.
- Distribution of Capital Gains—includes that portion of the capital gains on the institution's investments used by the institution, usually for current operating purposes. Such distributions are in accordance with the total-return concept. A more detailed discussion of this concept is included in *HEFM: Data Providers' Guide,* chapter 8.
- Designation of Unrestricted Funds—includes those unrestricted funds designated (and therefore transferred) for a specific purpose in another fund group by the institution's governing board. Although such designations usually involve unrestricted funds of the Current Fund, a redesignation of funds previously designated for a different purpose may be made and the subsequent transfer recorded in this category.
- Other Nonmandatory Transfers—includes all nonmandatory transfers not included in one of the above categories. Other nonmandatory transfers will often be itemized when of material importance.

4. *Summary Data.* The final section of the Statement of Changes in Fund Balances summarizes the results of all of the flows into, out of, and among the various fund groups for each fund group. These figures can be related directly to those shown for each fund group in the Balance Sheet.

a. *Net Increase/(Decrease) for the Year.* Includes the net increase (shown as a positive figure) or decrease (shown as a negative figure in parentheses) of the fund balance for each fund group. The figure shown in this category is determined for each fund group by adding the figures for *Total Additions* and *Transfers Into* and subtracting the figures for *Total Deductions* and *Transfers Out Of.*

b. *Fund Balance—Beginning of Year.* The total of the fund balance *prior* to any of the additions, deductions, and transfers described in the statement for that fund group.

c. *Fund Balance—End of Year.* The total for the fund balance *after* all of the additions, deductions, and transfers described in the statement. It is determined by adding (or subtracting) the *Net Increase/(Decrease) for the Year* and *Fund Balance—Beginning of Year.*

Statement Uses and Limitations

The Statement of Changes in Fund Balances portrays the flow of funds for the entire institution, and it should be used whenever data requiring an institutional focus are needed. The uses and limitations of the Statement of Changes in Fund Balances are illustrated below by questions and answers.

1. What are the sources of funds that are available to support current operations?
   Answer: The answer to this question can be found by looking at those sources itemized (in rows) in the *Additions* section of the Statement of Changes in Fund Balances. When using the Statement of Changes in Fund Balances, the reader should understand the difference between *additions* and *revenues.* The two terms are identical when referring to unrestricted funds. However, when used in reference to restricted funds, *revenues* means only those funds expended in accordance with their restrictions. *Additions* includes all restricted monies received during the reporting period (whether expended or not). Those monies received and available *for current operating purposes* are shown in the two columns, *Current Funds—Unrestricted* and *Current Funds—Restricted.* In figure 3, $7,540,000 of unrestricted funds were received, while $1,094,000 were received subject to the current-operations restriction.
2. What funds were received during the reporting period specifically for (1) the support of student, faculty, and staff loans; (2) the construction of institutional plant; and (3) additions to the institution's endowment fund?
   Answer: The respective answers to each of these questions can be found by looking at the *Additions* section in the (1) *Loan Funds* column, (2) *Plant Funds—Unexpended* column, and (3) *Endowment and Similar Funds* column. In figure 3, the answers are (1) $141,000, (2) $230,000, and (3) $1,679,000. The amounts shown represent funds restricted by the donor to those respective fund groups. Once again, these amounts were received during the reporting period, but they were not necessarily expended in that period. All unrestricted additions (even if they are later designated for use in one of these three fund groups) are shown in the *Additions* section in the column *Current Funds—Unrestricted.*
3. How much money was expended during the reporting period for current operating purposes?

Answer: In the *Deductions* section, the two row items for *Current Fund Expenditures* in the Current Funds columns provide the answer to this question. The deduction shown in the column *Current Funds—Unrestricted* is the amount of unrestricted monies used for current operations (in figure 3, the amount is $6,230,000) and the deduction shown in the *Current Funds—Restricted* column is the amount of restricted funds used for current purposes (in figure 3, the amount is $1,014,000). (Note that these amounts do not include transfers out of the Current Fund.)

4. How much was expended during the reporting period for the construction of plant facilities?

   Answer: The amount expended from the Plant Funds for new facilities is the deduction *Expended for Plant Facilities* in the column *Plant Funds—Unexpended* (in figure 3, the amount is $1,200,000). The value of this new institutional plant will be shown as the item *Additions to Plant Facilities* in the column *Plant Funds—Investment in Plant.* It should be noted that while major additions to the institution's investment in plant usually are made from the Unexpended Plant Fund, Current Funds expenditures also may result in increases in plant investment.

5. What other kinds of transactions that resulted in the use of institutional funds occurred during the reporting period?

   Answer: Several other items are shown in the *Deductions* section that result in a use of funds within one of the fund groups. In most cases, such deductions are characteristic of the fund group itself (for example, the deduction *debt service* in the Plant Funds—Retirement of Indebtedness subgroup). (It should be emphasized that the total deductions for a particular fund group seldom will be equal to the total additions to that same fund group.) Transfers also must be taken into account before a net change (either positive or negative) can be determined for any fund group.

6. What is the extent and nature of the flow of funds *among* the institution's various fund groups?

   Answer: The section *Transfers* describes the net movement of funds between the institution's fund groups. A transfer is shown as a positive amount in the recipient fund group's column (a flow of funds *out* of the fund group).

7. What, for each fund group, is the net result of the flow of funds into, out of, and among fund groups?

   Answer: The row item *Net Increase/(Decrease) for the Year* answers this question for each fund group. It represents the net result of all additions, deductions, and transfers within each fund group. (A net addition to the fund group is shown as a positive figure and a net deduction as a negative figure in parentheses.) A summary of the effect of this net increase or decrease on each group's fund balance is shown in the two row items, *Fund Balance—Beginning of Year* and *Fund Balance—End of Year.*

4

Statement of Current Funds Revenues, Expenditures, and Other Changes

Description

The Statement of Current Funds Revenues, Expenditures, and Other Changes provides the same basic kind of information that appears in the Statement of Changes in Fund Balances but in considerably more detail and only for the Current Funds group. Basically, this statement focuses on the financial activity of the Current Fund by describing the flow of resources into and out of this fund group. The additional detail provided for the Current Funds group by the Statement of Current Funds Revenues, Expenditures, and Other Changes is normally included in financial reports because of the importance of the Current Fund. This fund group usually includes the bulk of institutions' financial activity (although in many institutions, other fund groups may contain more resources). The Current Fund is also the focus for the institution's day-to-day activities and (with the Plant Fund) is the major concern of public funders. For these reasons, additional detail for the Current Fund has typically been included as a recommended financial statement by generally accepted accounting principles. Although it is possible to provide this kind of detail for other fund groups (and many institutions do so with supplementary financial statements), only the Current Fund statement is typically included as one of the basic financial statements.

It should be noted that while the Statement of Current Funds Revenues, Expenditures, and Other Changes provides the same *basic* kind of information (albeit in more detail) as the Statement of Changes in Fund Balances, there are

Sample Educational Institution

FIGURE 4

STATEMENT OF CURRENT FUNDS REVENUES, EXPENDITURES, AND OTHER CHANGES

Year Ended June 30, 19____

	Current Year Unrestricted	Current Year Restricted	Current Year Total	Prior Year Total
Revenues				
Tuition and Fees	$2,600,000		$2,600,000	$2,300,000
Governmental Appropriations—Federal	500,000		500,000	500,000
Governmental Appropriations—State	700,000		700,000	700,000
Governmental Appropriations—Local	100,000		100,000	100,000
Governmental Grants and Contracts—Federal	20,000	$ 375,000	395,000	350,000
Governmental Grants and Contracts—State	10,000	25,000	35,000	200,000
Governmental Grants and Contracts—Local	5,000	25,000	30,000	45,000
Private Gifts, Grants, and Contracts	850,000	380,000	1,230,000	1,190,000
Endowment Income	325,000	209,000	534,000	500,000
Sales and Services of Educational Activities	190,000		190,000	195,000
Sales and Services of Auxiliary Enterprises	2,200,000		2,200,000	2,100,000
Other Sources (if any)	40,000		40,000	
Total Current Revenues	7,540,000	1,014,000	8,554,000	8,180,000
Expenditures and Mandatory Transfers				
Educational and General				
Instruction	2,960,000	489,000	3,449,000	3,300,000
Research	100,000	400,000	500,000	650,00
Public Service	130,000	25,000	155,000	175,000
Academic Support	250,000		250,000	225,000
Student Services	200,000		200,000	195,000
Institutional Support	450,000		450,000	445,000
Operation and Maintenance of Plant	220,000		220,000	200,000
Scholarships and Fellowships	90,000	100,000	190,000	180,000
Educational and General Expenditures	4,400,000	1,014,000	5,414,000	5,370,000
Mandatory Transfers for:				
Provision for Debt on Educational Plant	190,000		190,000	130,000
Loan Fund Matching Grants	2,000		2,000	
Total Educational and General	4,592,000	1,014,000	5,606,000	5,500,000
Auxiliary Enterprises				
Expenditures	1,830,000		1,830,000	1,730,000
Mandatory Transfers/Auxiliary Enterprises	320,000		320,000	320,000
Total Auxiliary Enterprises	2,150,000		2,150,000	2,050,000
Total Expenditures and Mandatory Transfers	6,742,000	1,014,000	7,756,000	7,550,000
Other Transfers and Additions/(Deductions)				
Excess of Restricted Receipts over Transfers to Revenues		45,000	45,000	40,000
Refunded to Grantors		(20,000)	(20,000)	
Unrestricted Gifts Allocated to Other Funds	(650,000)		(650,000)	(510,000)
Portion of Quasi-Endowment Gains Appropriated	40,000		40,000	
Net Increase in Fund Balances	188,000	25,000	213,000	160,000

There are several possible formats for a Statement of Current Funds Revenues, Expenditures, and Other Changes. Another format is shown in section 5:7 of *Administrative Service* (Washington, D.C.: NACUBO, 1974), pp. 6-7. Although the formats vary, the amounts shown in this illustration are identical to those in the *Administrative Service*.

distinctions. The most important of these is that while the Statement of Changes in Fund Balances deals with additions and deductions, the Statement of Current Funds Revenues, Expenditures, and Other Changes reports revenues and expenditures. While this distinction may seem like mere semantics, the principles of postsecondary-education fund accounting make it an important one.

The difference between additions and revenues occurs in the restricted-fund area. When restricted monies are received (that is, the cash is in hand) by the institutions, they are reported as additions to the fund balance in the appropriate fund group. Under the principles of accrual accounting, however, revenues are not reported until they are earned (that is, until the money is spent for the specified purpose). This distinction can lead to a lag of revenue reporting behind addition reporting. If the delay occurs over the boundary of a fiscal period, the figures for revenues and additions will differ. This distinction does not occur in the unrestricted funds, since they are available for use (that is, they are reported as revenue) as soon as they are added to fund balances. The remainder of the information reported in the Statement of Current Funds Revenues, Expenditures, and Other Changes is equivalent to that of the Statement of Changes in Fund Balances, although in more detail.

Format

The Statement of Current Funds Revenues, Expenditures, and Other Changes shows revenues by source and restriction categories and expenditures by use and restriction categories. Although the example Statement of Current Funds Revenues, Expenditures, and Other Changes displayed in figure 4 uses only two restriction categories (unrestricted and restricted), institutions may further subdivide the unrestricted column into undesignated and designated funds. The revenue and expenditure categories used in figure 4 are the standard *HEFM* revenue and expenditure categories and are recommended by generally accepted accounting principles. The other transfers and additions/(deductions) are generally specific to the institution, and therefore the categories used in figure 4 are illustrative only. Many institutions will support the Statement of Current Funds Revenues, Expenditures, and Other Changes with more detail and schedules than shown in figure 4, by breaking out additional sources of revenue (such as out-of-state tuition and fees) or by showing expenditures by subfunction (for example, libraries), organizational unit (for example, College of Arts and Sciences), or object of expenditure (for example, faculty salaries). This additional detail does not, however, change the basic format or principles of the Statement of Current Funds Revenues, Expenditures, and Other Changes.

Definitions

The following terms are used in the Statement of Current Funds Revenues, Expenditures, and Other Changes:

1. *Revenues.* For definitions of these revenue categories, see chapter 1. For technical definitions, see the *Higher Education Finance Manual: Data Providers' Guide,* chapter 5.
   a. Tuition and Fees
   b. Governmental Appropriations—Federal
   c. Governmental Appropriations—State
   d. Governmental Appropriations—Local
   e. Governmental Grants and Contracts—Federal
   f. Governmental Grants and Contracts—State
   g. Governmental Grants and Contracts—Local
   h. Private Gifts, Grants, and Contracts
   i. Endowment Income
   j. Sales and Services of Educational Activities
   k. Sales and Services of Auxiliary Enterprises
   l. Sales and Services of Hospitals
   m. Other Sources
   n. Independent Operations
2. *Expenditures and Mandatory Transfers.* Definitions of these expenditure categories may be found in chapter 1. Technical definitions may be found in the *Higher Education Finance Manual: Data Providers' Guide,* chapter 6.
   - Educational and General
     a. Instruction
     b. Research
     c. Public Service
     d. Academic Support
     e. Student Services
     f. Institutional Support
     g. Operation and Maintenance of Plant
     h. Scholarships and Fellowships
     i. Mandatory Transfers
   - Auxiliary Enterprises
   - Hospitals
   - Independent Operations
3. *Other Transfers and Additions (Deductions).* Any financial activity of a fund group that does not fit one of the above categories. For example, excess of restricted receipts over transfers to revenues, nonmandatory transfers, and refunds to grantors are included.

Statement Uses and Limitations

The Statement of Current Funds Revenues, Expenditures, and Other Changes enables data users to see the sources of operating revenue for the institution and the purposes or functions for which that revenue is spent. The following questions illustrate the kinds of uses of the Statement of Current Funds Revenues, Expenditures, and Other Changes.

1. What was the amount of Unrestricted Current Funds earned from tuition and fees during the reporting period?
   Answer: Tuition and fees are almost always Unrestricted Current Funds revenues, the only exception being certain restricted student fees. Total *Tuition and Fees* earned for this period were $2,600,000, as shown in figure 4.
2. What was the amount of restricted federal grants and contracts received during the reporting period?
   Answer: It is impossible to answer this question using the Statement of Current Funds Revenues, Expenditures, and Other Changes. The amount of restricted funds *received* can be found only on the Statement of Changes in Fund Balances. The figure shown in figure 4 for *Governmental Grants and Contracts—Federal* ($375,000) represents those restricted federal grant and contract monies that were *expended* from the sum total of such monies received in all reporting periods.
3. How much of Unrestricted Current Funds were expended for instruction during the reporting period? How much for scholarships and fellowships?
   Answer: Expenditures are typically categorized in a set of functional categories. The categories shown in figure 4 are the functional categories that are widely accepted in higher education for the classification of expenditure data. These categories can be broken down into a set of subcategories if further detail is needed. In this example, expenditures for *Instruction* were $2,960,000, while expenditures for *Scholarships and Fellowships* totaled $90,000.
4. How much was transferred out of the Current Fund to fulfill binding legal requirements for matching grants in the Loan Fund?
   Answer: When users want to know about transfers made to fulfill binding legal requirements, they should look to the section describing mandatory transfers. In this case the mandatory transfer made for matching grants in the Loan Fund totaled $2,000.
5. What does the item *Excess of Restricted Receipts Over Transfers to Revenues* in figure 4 tell the user?
   Answer: This item is part of the section of the statement used to summarize nonmandatory transfers of the Current Fund and changes in the fund balance of the Current Fund. The category *Excess of Restricted Receipts over Transfers to Revenues* tells the user how much of an excess of restricted funds was received during the period over what was expended during the period. This

excess of receipts over expenditures results in an addition to the restricted fund balance of the Current Fund. In this example, the addition resulting from an excess of restricted receipts over expenditures is $45,000 while the *Net Increase* in the total Current Fund balance is $213,000. The net increase (or decrease) is calculated as a total of *Revenues* plus *Transfers In* minus *Expenditures and Transfers Out.*

Part II

Implementation of the *HEFM* Guidelines

Introduction to Part II

This part provides the data user with an overview of the strategic choices that must be made in implementing the *HEFM* guidelines. Chapter 5 describes what must be considered in carrying out such a process from the perspective of a state-level agency. Chapter 6 discusses the implementation of the *HEFM* guidelines within an institution.

5

Implementation at the State Level

Background

The *Higher Education Finance Manual (HEFM)* series describes guidelines for financial reporting in postsecondary education. Among them are (1) guidelines for revenue and expenditure categories, fund structure, basis of accounting, and formats for standard financial statements and (2) definitions of financial-accounting terms. Although the *HEFM* guidelines are comprehensive, their use still requires of state agencies or institutions a formidable amount of interpretation.

This chapter outlines some of the strategies that a state agency may wish to consider when implementing the *HEFM* guidelines in a statewide financial-reporting system. It does not prescribe the right way, since each agency has its own special responsibilities and powers affecting the form of the financial-reporting structure. Rather, this chapter offers a partial agenda of issues to be addressed as the guidelines are implemented. Depending on their particular circumstances, the state agency and institutions can and should work out a detailed implementation process.

While the strategic considerations and exemplary processes outlined here will not always be appropriate for every state in every circumstance, they have been distilled from the experiences of a number of states that have implemented or are currently implementing the *HEFM* guidelines. Therefore states seeking to implement the *HEFM* guidelines or to refine or modify existing *HEFM*-based systems can expect to benefit from consideration of these issues.

Reporting Structure versus Accounting System

A fundamental strategy consideration when one begins to think about implementing the *HEFM* guidelines at the state level is whether the state agency wishes to incorporate those guidelines as part of a *reporting structure* or an *accounting system*. A reporting structure strategy specifies a set of conventions for reporting institutional financial data to the state. An accounting system strategy, on the other hand, specifies the internal accounting practices to be used by the institutions, making the full range of accounting information available to the state agency in a standardized fashion. Both strategies are legitimate ways of implementing the *HEFM* guidelines. It should be noted, however, that this is not strictly an either/or choice, since many intermediate strategies can be pursued.

Both of these strategies have advantages and drawbacks. The *accounting system strategy* can produce financial data that are more uniform among institutions, since the internal accounting practices of the institutions are controlled at the state level. The financial data provided to the state agency may also be much more detailed. Therefore an accounting system may be useful for the fiscal-control function exercised by many statewide governing boards. Institutional accounting systems can be linked to or included in an overall state-government accounting system. The accounting system strategy also offers a state agency greater analytical potential. The agency will have access to *all* the financial data of the institutions and can conduct any analysis without having to ask the institutions to reformat their data. This may be particularly valuable, for example, when the state agency must respond to ad hoc requests for financial analysis from the legislature.

On the other hand, an accounting system strategy may produce an inflexible structure that meets poorly the institutions' own needs for financial information. The additional information available to the state agency allows, and may even encourage, state-level intervention in issues more appropriately and effectively dealt with at the institutional level. Moreover, the great volume of data generated by the accounting approach may encourage the state agency to use accounting data for all its financial-information needs, when in fact, financial information other than accounting data may be more useful for some of the agency's planning activities. For example, institutional accounting information has limited utility in addressing questions of student access and financial aid. Further, an accounting system generates and requires a great mass of detailed data. Many state agencies have no need for that amount of data and may indeed be overwhelmed by the volume of data generated. Finally, the implementation of a complete accounting system for a state system of postsecondary education is a major undertaking and requires a significant commitment of resources by the state agency and the institutions. It is questionable whether the accounting system will be effectively standardized in the absence of such a commitment of resources. Thus many of the advantages of this approach may be lost.

A *reporting structure strategy* is capable of producing much of the institutional financial data generated by the accounting system strategy, but typically it provides only for the reporting of particular kinds of data in a particular format. Compared to an accounting system, a reporting structure generally is less detailed, less costly to develop, and less divisive politically. A state agency can design a reporting structure that extracts only those institutional financial data needed to serve its purposes. The only requirement imposed on the institution by the state is the generation and reporting of financial data in the state reporting format. Thus the institutions are spared the burden of reporting individual transactions and given the flexibility to design an accounting system that meets the internal needs of the institution for financial control and management information.

On the other hand, a reporting structure strategy locks a state agency into receiving and using predetermined financial data. Since not all potential needs for financial data can be anticipated when designing the format of a reporting structure, it may be necessary to generate special financial information to respond to these needs. If such a practice becomes commonplace, a heavy burden can be placed on the institutions and state agencies, and many decisions will be made with less reliable ad hoc financial data. A second drawback of a reporting structure is that all other things being equal, it cannot produce financial data of the accuracy and consistency of the data generated by an accounting system. Different institutions will always have different ways of doing things. While diversity should not be considered a disadvantage in itself, it will impair to some degree the uniformity of financial data from different institutions. Since even a detailed set of reporting guidelines will be less exact than an accounting system that emphasizes fiduciary controls, uniformity problems tend to be greater with a reporting structure than with an accounting system.

Although these strategies have been presented as polar opposites, many intermediate approaches can be taken. At the accounting-system end of the spectrum, a state agency may: (1) specify each individual cost center; (2) develop an accounting system with structured cost-center codes but with institutional flexibility regarding the definition of cost centers; (3) specify institutional accounting structures but require the reporting of only selected financial data to the state agency; or (4) develop more general guidelines about institutional accounting systems. Using a reporting structure strategy, an agency may develop an extensive set of detailed state-specific guidelines (which may specify a particular activity look-up table) or may adopt one of the sets of definitions in a nationally recognized structure (for example, *HEFM*). The state agencies, in conjunction with the institutions, will have to weigh the advantages and disadvantages of each of these approaches in light of local circumstances. It should be noted that most state agencies have adopted a reporting structure strategy, although some state-level governing boards have developed a centralized accounting system.

Adaptations of the *HEFM* Guidelines

The guidelines in the NCHEMS *Higher Education Finance Manual* have gained much credibility because of their close relationship to those in the publications of two other organizations—*Audits of Colleges and Universities* (as revised in 1974), published by the American Institute of Certified Public Accountants (AICPA), and *College and University Business Administration* (1974), published by the National Association of College and University Business Officers (NACUBO). The three documents were developed at about the same time in the early 1970s, and NCHEMS, AICPA, and NACUBO made a concerted effort to coordinate the development process. The Joint Accounting Group, a committee comprising representatives of the three organizations, was charged with assuring that all three documents were compatible and based on uniform definitions of transactional accounting data. As a result, the three documents describe a common set of guidelines for different audiences—the *Audit Guide* is oriented to auditors, the *CUBA-74* manual to institutional business officers, and *HEFM* to planners and managers in postsecondary education. In 1978, a joint NCHEMS/NACUBO committee refined and expanded the guidelines for expenditure categories. The refined expenditure categories are included in *HEFM: Data Providers' Guide* and in supplement 5:2:1 of the *Administrative Service* (Washington, D.C.: NACUBO 1978).

Although the *HEFM* guidelines were designed to be consistent with generally accepted accounting principles, it is important for state agencies to examine how well a particular guideline meets state and institutional needs for financial data and to consider possible adaptations of the guidelines. Thus the state guidelines will better address special legal, administrative, and analytical requirements. A number of the more common adaptations of the *HEFM* guidelines are discussed below:

- *HEFM* recommends that the modified accrual method of accounting be used (modified to the extent that depreciation concepts are not used). See part 1 of this document for a discussion of cash and accrual accounting. Many states and their public institutions must modify this guideline, since state laws or regulations mandating the cash basis of accounting are relatively common. Institutions are particularly affected by these laws when they participate in a general state accounting system. Where methods differ, state auditors must perform the audits in accord with state law rather than with national guidelines. Given this legal framework and the need to account for state appropriations, a number of states base their guidelines for financial reporting of postsecondary education on cash accounting. Institutions in those states will often keep their books on a cash basis and make adjustments at the end of each fiscal year to present a formal financial report on an accrual basis. The dollar difference between cash and modified-accrual accounting should not be exaggerated (at least on a year-to-year basis). Revenues and expenditures falling into year 2 instead of year 1 because of accrual considerations will tend to be offset by those falling into year 3 instead of year 2. In the long run, particularly in large, complex institutions, they will tend to balance out. Significant exceptions to this generalization are possible where particularly large projects extend across fiscal-period boundaries.

- Besides being a common structure nationwide for reporting institutional financial data through the Higher Education General Information Survey (HEGIS), the *HEFM* revenue and expenditure categories provide a prototypical reporting structure that states and institutions may, and often do, adapt for their own purposes. These adaptations typically are made to meet a local need for financial information about a particular program area or to express a unique state perspective about various revenues or expenditures. Using the *HEFM* revenue and expenditure structure as the starting point for a locally adapted structure allows a state agency to more easily convert its financial information to the standard national format when data in that format are needed. For example, completion of the HEGIS finance forms and the use of HEGIS data rely on data in the standard *HEFM* format. A catalog of state-level adaptations of the *HEFM* guidelines may be found in *State-Level Postsecondary Education Financial Reporting* (Richard H. Allen, [Boulder, Colo.: NCHEMS 1978]).

Among the common adaptations of the *HEFM* revenue and expenditure categories are:

1. Use of a separate expenditure subcategory (within the Research Category) for the Agricultural Experiment Station.
2. Use of the functional expenditure "supercategories" (Educational and General, Auxiliary Enterprises, Hospitals, and Independent Operations) as the structure for financial reporting.
3. Establishment of a revenue category for Indirect Overhead Recovery.
4. Elimination of the *HEFM* Transfers In revenue category.
5. Specification by a state agency of a common disposition for a particular kind of revenue or expenditure by all institutions, where the *HEFM* guidelines suggest different dispositions; for example, a state may declare that all revenues and expenditures related to intercollegiate athletics shall be considered Auxiliary Enterprise revenues and expenditures, whether or not a particular athletic program meets the definition of an auxiliary enterprise, that it is essentially self-supporting.
6. Specification by a state agency of how to reflect internal service departments in financial reports (that is, where chargebacks should be reported); this is optional in the *HEFM* guidelines.

The NCHEMS/NACUBO Committee on the Joint Accounting Group guidelines has now recognized several other adaptations of the original *HEFM* revenue and expenditure categories as being in accord with *refined* national standards.[1] Examples of these refined national standards include the separation of credit and noncredit instruction, the use of a separate subcategory for Student Services Administration, the use of a separate subcategory for Administrative Computing, and the use of subcategories within the Operation and Maintenance of Plant category.

Designing the Fund Structure

The design of the fund structure is one of the more significant issues in the implementation process. The standard *HEFM* fund structure can be used at varying levels of detail and adapted to fit the state's budgetary process.

THE STANDARD HEFM FUND STRUCTURE

The *HEFM* guidelines recommend that financial information be reported by fund group—Current Funds, Loan Funds, Endowment and Similar Funds, Annuity and Life Income Funds, Plant Funds, and Agency Funds. Of these, the Current Fund, which includes the annual operations of the institution, generally receives the greatest attention from a state agency.

Additional guidelines in *HEFM* allow the Current Funds group to be split into Restricted and Unrestricted Funds. A second subdivision of Unrestricted Current Funds into Designated and Undesignated Funds is a further option allowed by the *HEFM* guidelines.

> *Undesignated, Unrestricted Current Funds* are those for which neither the institutional governing board nor an external funder has specified a particular use.
> *Designated, Unrestricted Current Funds* are those whose use is confined to a particular purpose by action of the institution's governing board. (In practice, institutional top management may often designate funds, using authority delegated by the board.)
> *Restricted Current Funds* are those legally restricted to a particular purpose (for use for a particular function or by a specific organizational or budget unit) by a funder outside the institution.

The level of detail used with the standard *HEFM* fund structure depends on the needs and obligations of the state agency. If the financial data are to indicate only the size of the postsecondary-education enterprise in the state, a relatively simple fund structure will suffice. The aggregate Current Funds expenditures and revenues figures will provide this information. Using Unrestricted and

1. See a) *HEFM: Data Providers' Guide* and b) Supplement 5:2:1 of the *Administrative Service for the refined standards.*

Restricted subcategories in the Current Fund will give an overview of the legally discretionary resources of the institution. Since almost all institutions maintain data in the subcategories, little additional effort will be required to report at this greater level of detail. The addition of a Designated Fund category within the Unrestricted Current Fund can be useful for segregating financial activities often considered purely institutional (auxiliary enterprises, receipt of unrestricted gifts) from those having significant state interest.

If the state agency has substantial responsibilities for managing institutions (as a statewide governing board often does), a more detailed fund structure may be needed. In this circumstance, financial information on *each* restricted and designated fund (on each project, auxiliary enterprise, or designation) is commonly reported. This information is often accompanied by summary as well.

ADAPTATION TO THE BUDGETARY PROCESS

Although most states use fund structures derived from the *HEFM* guidelines, designing a fund structure for postsecondary-education financial reporting that is compatible with a state's own budgetary concerns is an important task that may involve adaptations to the *HEFM* guidelines. In many cases, the adaptations to the *HEFM* fund structure focus on the kind of revenue received by an institution and the state's relative interest in the use of that revenue. One such adaptation follows:

Current Funds

- General Fund (or Educational and General Fund) subgroup
- Auxiliary Enterprise Fund subgroup
- Hospital Fund subgroup
- Restricted Funds subgroup

Each is discussed below in a generic sense. Specific definitions differ from state to state.

The General Fund. Since state agencies and legislatures have particular interest in appropriated tax funds and certain other kinds of revenue, including student fees, local tax revenues, and some minor sources of income, these revenues (and the expenditures they support) are often segregated in a subgroup of the Current Fund. This subgroup of funds is often entitled the General Fund, or the Educational and General Fund. Many times, a state-level reporting structure will include only this fund and these revenue sources. The General Fund generally corresponds to *unrestricted* Educational and General activities in the standard *HEFM* reporting structure.

Auxiliary Enterprises and Hospital Funds. Since auxiliary enterprises are, by definition, essentially self-supporting (from user fees), and since hospitals (except for instruction and research) are often largely self-supporting, state agencies frequently have less interest in those operations, even though, like the General Fund, monies related to them include mostly unrestricted funds. Therefore, a state-level reporting structure will often identify separate funds for Auxiliary Enterprises and Hospitals. These operations can in this way be segregated from the state-funded activities, can be considered separately, and their special characteristics can be taken into account. An Auxiliary Enterprises or Hospital Fund is generally identical to the *HEFM* expenditure and revenue category of the same name and may include both restricted and unrestricted funds, although the bulk of such funds will be unrestricted.

Restricted Funds. State agencies often have little interest in restricted funds, since most are generated by the institution without state involvement (for example, funds for federal contact research and restricted-gift funds). To identify these funds, an institution or state agency may establish a Restricted Fund within the Current Funds group. In general, a Restricted Fund in this context is equivalent to Restricted Educational and General activities as defined by the *HEFM* guidelines.

If an adapted Current Fund structure is used, further analysis will be necessary to create financial reports according to the standard *HEFM* guidelines. However, as long as institutions maintain appropriate restriction and designation categories in their accounting records, as they are required to do for fiduciary reporting, this analysis remains feasible.

Expenditure Categories

The expenditure categories chosen for a state-level financial reporting structure are an important aspect of the implementation process. Three main types of expenditure categories need to be considered: (1) functional, (2) organizational, and (3) object-of-expenditure. Each of these three types has strengths and weaknesses, and each can be used at varying levels of detail. The choice of type(s) of categories and level of detail requires careful attention to the needs of the state agency and others for financial data and to the capacity of the institutions to provide that data at a reasonable cost. Some of these considerations for each type are discussed below.

FUNCTIONAL EXPENDITURE CATEGORIES

Functional expenditure categories are essentially program-related. They focus on the major goals of the institution and the activities necessary to accomplish them. For example, the *HEFM* functional expenditure categories identify Instruction, Research, Public Service, and so on as reporting units for postsecondary education. Because functional categories are program-related, they are applicable to all postsecondary institutions, whereas structures based on organizational units are unique by institution. This universality, aided by the widespread adoption of the *HEFM* expenditure categories, allows the application of data in this format in situations where comparability of institutional data is important. Among such applications are state-level budgeting, cost comparisons, and other analyses of institutional operations, as well as state-level planning. It should be noted that although the *HEFM* functional expenditure categories are inspired by programmatic consideration, many compromises have been made in the structure: (1) to include important fiscal and organizational entities (hospitals, auxiliary enterprises), (2) to ease the collection of data, and (3) to maintain fiduciary controls. Accordingly, the *HEFM* expenditure categories do not have all the attributes of pure program categories. However, the *HEFM* expenditure categories were designed to be compatible with and easily translatable to the programs of the NCHEMS *Program Classification Structure (PCS)*, which has more purely programmatic criteria. (See chapter 7 of this document for a detailed discussion.)

As with all program categories, the major drawback in using functional expenditure categories as the basis for a reporting structure is that they lack utility for control purposes. Since the categories do not strictly follow organizational-unit lines, assigning responsibility for performance of activities within a category is impossible, except at the institutional level. Although few state agencies attempt to control institutions at this level, an agency that does so will not find the functional expenditure categories described above very satisfactory.

The *HEFM* functional expenditure categories can be used at various levels of detail, depending on the needs of the state agency. The *HEFM* guidelines provide for three levels of detail: (1) *supercategories* (Educational and General, Auxiliary Enterprises, Hospitals, and Independent Operations); (2) *categories,* such as Instruction, Research, and Public Service; and (3) *subcategories,* such as General Academic Instruction, Vocational/Technical Instruction, and Special Session Instruction. Further additional levels of detail may be used within the Instruction category, since the *HEFM* subcategory structure is designed to be compatible with commonly used structures for instructional disciplines and/or levels.

An overview of a state postsecondary-education system can be generated using financial data organized in *HEFM* functional expenditure categories. Often the use of supercategories will suffice. Many states, however, use the category level of detail for this purpose. If the *HEFM* functional expenditure categories are to be used for *budgetary or analytic purposes* (costing, comparative studies), the level of detail needed depends largely on the complexity of the process to be used. For example, many states successfully use expenditure categories (or even supercategories) in their budgetary process. These states have relatively simple resource-allocation procedures that do not require further detail. On the other hand, a complex formula-budget process may require a great deal of information by subcategory or even by discipline and/or level for the various formulas that generate funds for the institutions. Detailed information is particularly useful for deriving cost data and for similar kinds of analysis. When using detailed financial information for purposes of comparison, state agencies should be aware that although detailed comparisons are both possible and useful, they require that all states or institutions being examined have the data in the same format. In addition, detailed comparisons are probably more subject to errors and misinterpretations deriving from differences in reporting or organizational style than are aggregate comparisons.

ORGANIZATIONAL OR BUDGETARY-UNIT CATEGORIES

The use of organizational or budgetary units as reporting categories has different implications than the use of the *HEFM* functional categories. Organizational-unit data are of limited use for interinstitutional comparison (since organizational structures of institutions vary widely) or for state-level budgeting (unless institutional budgets are tightly controlled at the organizational-unit level and analyzed in detail by state agencies). If a state agency has management responsibilities for institutions (as do statewide governing boards) and chooses to exercise that responsibility centrally, organizational-unit information will be necessary to ensure control and accountability. Organizational or budgetary-unit data can also be helpful in certain specialized analyses. For instance, studies of medical education will typically be based on the organizational entity of the Medical School rather than on functional expenditure categories.

The level of detail used in reporting structures based on organizational units depends on the level of interest a state agency has in the internal operations of an institution. For a general overview, the school (of Music) or college (of Arts and Sciences) level is often used. It is common for a state agency interested in analyzing institutional operations to collect information at the department level.

OBJECT-OF-EXPENDITURE CATEGORIES

Object of expenditure is another type of reporting category often used by state agencies. Object-of-expenditure data will typically include such subdivisions as Salaries and Wages, Fringe Benefits, Equipment, and so on. The uses of these categories depend greatly on their level of detail. Their level of detail can vary widely from a category such as Compensation, on the one hand, to one such as Clerical Overtime Payments on the other.

Object-of-expenditure data in the aggregate can be used at the state level for very general budgetary control and analysis. More detailed object-of-expenditure data (especially when combined with the organizational or functional expenditure data) can be of use in analyzing institutional operations. For example, these data can be used to analyze cost behavior. Faculty salaries will have a different relationship to fluctuations in enrollment than will expenditures for laboratory equipment. Object-of-expenditure data often will play a part in program reviews by the state agency, because they describe the kind of resources the agency is being asked to commit.

REPORTING EXPENDITURES IN TWO OR MORE TYPES OF CATEGORIES

Reporting expenditures in two or more types of categories can provide useful information to a state agency. For example, when a state agency desires to analyze a particular institutional operation in depth, both organizational-unit and object-of-expenditure data are often useful. As has been noted, a detailed costing approach will generally require both functional and object-of-expenditure data. In general, the different types of reporting categories can be combined in many creative ways. These combinations are in no way inconsistent with the *HEFM* guidelines. While *HEFM* focuses on functional expenditure categories, one should not assume that such categories are incompatible with organizational or object-of-expenditure considerations.

However, such a dual structure may be costly to implement and operate. The use of object-of-expenditure or organizational-unit data in combination with functional expenditure categories can place a heavy burden on both the reporting institutions and the collecting agencies. The number of cells of data expands greatly and with it the potential for error or misinterpretation. Thus the decision to collect data in two or more types of categories should be made carefully, recognizing the expense and possible error that can result.

The Implementation Process: Strategies for Implementation

Whether the impetus for the design of a statewide reporting structure comes from a state agency seeking comparable data or from institutions seeking to report financial data in a generally accepted way, it is important that the two levels cooperate extensively. Repeated experience in the *HEFM*/SLTA pilot states and elsewhere has shown that various individuals implementing written guidelines will interpret them differently, even when the guidelines are carefully written and all terms are extensively defined. A state agency cannot simply issue a set of guidelines or instruct institutions to comply with a specific document (such as *HEFM*) and expect that uniform data will be reported without an appropriate implementation strategy. This is particularly true when the guidelines call for great detail in the reporting of data. The most common reasons for failure to generate uniform data are: (1) institutional resistance to the guidelines; (2) failure to understand the guidelines at either the state level, the institutional level, or both; (3) failure to apply the guidelines correctly to a particular institutional setting; (4) reporting of financial data by a person unfamiliar with the guidelines; (5) contradictions within the state-level guidelines themselves; and (6) situations not anticipated by the guidelines. Therefore it is important that any implementation process have broadbased participation. One possible *model process* for developing and implementing a uniform set of reporting guidelines is outlined here.

Let us assume that a statewide coordinating agency wishes to implement a single financial-reporting structure among the institutions in its state. Let us further assume that the institutions and political authorities in the state generally support adoption of some sort of uniform financial-data guidelines. Finally, let us assume that a decision has been made to generally adopt the guidelines in the *Higher Education Finance Manual.*

The first step in the model process is the establishment of a committee to design the specific guidelines for the state. Ideally, each institution should be represented, but if this is unwieldy, the committee should nevertheless have wide representation (at a minimum, all sectors affected by the reporting requirements should be represented). It is recommended that the state agency initially contact the presidents of the institutions. In this way, the presidents will be informed of the upcoming change, can express concerns about the philosophy of the state-level financial-reporting structure, and can designate the appropriate person to represent their institutions. Even if an institution has a standing committee for finance issues, it is valuable to seek the understanding and support of the president. Generally, the representatives will be chief business officers or their designated deputies. But if the responsibility for financial reporting to the state is lodged elsewhere in an institution—for example, with the institutional research officer—then that person should be the representative. State agencies other than postsecondary-education agencies that are making significant use of institutional financial data should also be included.

In the model process, this committee has as its first set of agenda items discussion of the *HEFM* guidelines and the possible need for their adaptation to conditions within the state. It is helpful for the committee to review each of the strategic considerations described in this chapter and determine the potential uses of institutional accounting data at the state level.

Upon this base, the committee can develop a set of written guidelines for preliminary implementation. It is valuable for each institution in the state to then produce a trial set of reports according to these guidelines. If all institutions are not represented on the committee, members of the committee should act as resource people to help institutions prepare their trial reports. It is helpful if each institution shares with the others a "crosswalk" showing which organizational units and activities were included in which expenditure categories and which expenditures were considered restricted, designated, and undesignated-unrestricted.

With these "crosswalks" in hand, a review of the trial reports can begin. The more detailed the guidelines, the more desirable it is for the review process to be detailed. The data of each institution should be reviewed by a group of other participants in the process. If it includes representation from all institutions, the committee itself would be the appropriate vehicle. Otherwise, ad hoc groups of institutional representatives should be established that would refer any serious questions to the main committee. Each institution will then have an opportunity to explain the rationale for its own way of implementing each guideline and to discuss with the group the relative merits of differing interpretations. This interaction is more effective, although more time consuming, than review by state-agency staff alone. After this review, a modified, clarified, and expanded set of guidelines for preparing actual financial reports can be issued.

The kind of extensive, broadbased process described above has a number of advantages. It is consensus oriented. Each guideline is thoroughly discussed, and problems that may impede institutional compliance are considered. The development and review processes are excellent devices for training institutional and state personnel in the use and implementation of the guidelines. Participation of many persons with different perspectives and experience aids in the discovery of contradictions, difficulties of application, and unanticipated consequences of the guidelines. Finally, the trial-report process allows the guidelines to be used prior to the time when data must be collected for actual financial decisions. The uniformity of the data and confidence in its use are thus increased.

6

Institutional Implementation of the *HEFM* Guidelines

Background

The Joint Accounting Group issued its report on financial reporting guidelines for colleges and universities in March 1974. Since that time (due in large part to their incorporation in the publications of NACUBO, AICPA, and NCHEMS), the guidelines have been widely adopted by institutions throughout postsecondary education. The purpose of this chapter is to guide institutional administrators in implementing a financial accounting or reporting system that incorporates these guidelines (hereafter referred to as the *HEFM* guidelines).

As seen in chapter 5, development of a reporting format (which often involves an adaptation of the *HEFM* format) is a large part of the implementation task at the state level. However, the state-level implementation process assumes that the institutions in the state will adopt and operationalize that reporting format. Therefore in many cases (particularly for public institutions), institutional implementation of the *HEFM* guidelines begins with the reporting format as a given. Institutional implementation considers how best to incorporate the given *HEFM*-related reporting format into the data-collection process (that is, how to incorporate *HEFM* into the transactional accounting system), how to develop institutional budget reports and other planning documents that utilize the *HEFM* format, and how to reconcile the institution's needs for information with a *HEFM* format. Thus institutional implementation of the *HEFM* guidelines usually requires a great deal of consideration of data-processing concerns.

The solutions to these implementation problems are almost as diverse as the types of institutions confronting the problems. Therefore this chapter is based on the experiences of seven different institutions in implementing the *HEFM* guidelines. Administrators at each of these institutions described to the NCHEMS staff:

1. Their *reasons* for implementing a *HEFM*-based accounting and/or reporting system
2. The *purposes* served by their *HEFM*-based system (that is, the collection of transactional accounting data or the reporting of data)
3. The *elements* of the *HEFM* guidelines that they incorporated in their system, including any adaptations they made in the guidelines
4. The *process* they followed in implementing a system based on the *HEFM* guidelines

The administrators answered a series of questions about their experiences in each of these four areas. The following two assumptions underlie the descriptions by the seven administrators of their experiences:

a. The *HEFM* guidelines are identical to the guidelines set forth by NACUBO in *College and University Business Administration* (1974) and by the AICPA in *Audits of Colleges and Universities* (1973). Therefore if an institution implemented the set of guidelines described in any of these three documents, it was assumed that they implemented the *HEFM* guidelines.
b. *Implementation* is defined to include the adoption and incorporation of the *HEFM* guidelines (or elements of those guidelines) either into the transactional collection of financial accounting data or into the reporting of financial information.

Reasons for Implementing the *HEFM* Guidelines

Among those institutions surveyed, the most prevalent reason for implementing the *HEFM* guidelines was their desire for uniform financial information. In many instances, the institutions were part of a public state system. Uniform data were needed to carry out planning and management for the system as a whole as well as for the individual institutions within the system. The institutional administrators felt that the *HEFM* guidelines (in particular, the detailed category definitions and procedures for classifying data within categories) would help them generate uniform financial information.

The second most important reason for implementing the *HEFM* guidelines was to ease the problem of communicating with external agencies, in particular the federal government. Since the *HEFM* guidelines have been incorporated in the instructions for both the Higher Education General Information Surveys (HEGIS) and the financial reports administered by the National Science Foundation, the administrators felt that implementation of the *HEFM* guidelines in their own accounting/reporting systems would greatly ease their reporting burden.

In addition, several of the institutions adopted the *HEFM* guidelines because they were considered to be the accounting profession's standard for college and university financial reporting. In fact, in many states it has been at the initiation of institutional administrators that the state reporting requirements have been changed to comply with standards of the accounting profession (that is, the *HEFM* guidelines).

Other reasons for implementing the *HEFM* guidelines included the desire to collect programmatic expenditure data directly, thus avoiding a major analytical task. Administrators in two of the institutions said that implementation of the *HEFM* guidelines gave them the data needed to prepare their annual and monthly reports and to conduct the financial analyses they felt that they needed. The administrator in one institution felt that the *HEFM* guidelines gave him better financial control than the system used previously, while the administrator of a major research university said that the *HEFM* guidelines allowed him to more easily integrate institutional financial reports with those of the university's teaching hospital, since the *HEFM* guidelines provided categories for reporting the expenditures of a teaching hospital. Finally, several institutions implemented the *HEFM* guidelines to comply with their auditors' requirements.

Three of the seven institutions implemented the *HEFM* guidelines under a direct mandate (in each case, a state-imposed mandate to its public institutions), while two did so for their own reasons, and the other two stated they would have implemented the guidelines even if there had been no external pressure to do so.

Purposes for Using the *HEFM* Guidelines

The *HEFM* guidelines have been incorporated into the transactional accounting systems of four of the institutions, while the other three institutions use *HEFM* for reporting only.

As one of the administrators noted, *HEFM* is basically a set of guidelines for structuring data for financial reporting; little in *HEFM* deals specifically with transactional accounting. However, many institutions have chosen to incorporate those *HEFM* reporting guidelines directly into their transactional accounting systems, thereby simplifying the production of reports in the *HEFM* format. The alternative to incorporating the *HEFM* guidelines in the transactional accounting system is to use the crossover approach in which data collected in the format used for the transactional accounting system is translated into the *HEFM* format. The closer the format used in collecting accounting data is to the reporting format, the simpler such a crossover will be. If the *HEFM* categories and reporting procedures are built into the *transactional* accounting system, no crossover is needed.

The three institutions that implemented the *HEFM* guidelines for reporting purposes only could accomplish the crossover to the *HEFM* format with sufficient ease that they felt it was unnecessary to incorporate *HEFM* into their transactional accounting system. In two of the institutions, transactional data are collected in accounts that basically follow the guidelines set forth in the 1968 edition of *College and University Business Administration.* In the third institution, a structure unique to that institution is used for transactional data, while a look-up table built directly into its reporting software is used to reaggregate the accounting data into the *HEFM* format when needed for reporting. However, this institution will soon incorporate the *HEFM* guidelines directly into its transactional accounting system.

Elements of the *HEFM* Guidelines Implemented

The *HEFM* guidelines specify (1) a particular set of fund groups; (2) criteria for distinguishing among restricted, unrestricted, and designated funds; (3) the use of accrual accounting; and (4) a recommended set of revenue and expenditure categories. However, institutions that implement the *HEFM* guidelines do not necessarily incorporate all four elements of the guidelines in their accounting/reporting systems (although each of the institutions surveyed did, in fact, implement almost every element of the guidelines). In addition, institutions often adapt the *HEFM* guidelines to tailor them more to their particular needs. This section describes the types of adaptations made in the various elements of the *HEFM* guidelines by the institutions.

Fund Groups. The institutions implemented the fund-group element of the *HEFM* guidelines in a variety of ways. Three institutions adopted all of the *HEFM* fund groups exactly as they were defined. One adopted some of the *HEFM* fund groups as defined but did not have endowment funds or annuity and life income funds so did not use those fund groups. The remaining three institutions adapted the *HEFM* fund groups to meet their own needs.

Two institutions made adaptations primarily in the Current Fund: the Current Fund group was disaggregated to distinguish between the various types of unrestricted funds (general funds, designated funds, auxiliary enterprise funds) and restricted funds available for expenditure. While these changes reflect adaptations of the original *HEFM* fund groups, it is quite simple to reaggregate these fund groups into the *HEFM*-defined Current Fund group. These two institutions also added a fund group for retirement and insurance transactions.

The most significant adaptations of the *HEFM* fund groups were made by the community college that was surveyed. The community college also split the

Current Fund into several separate funds (that is, General Funds, Service Units Fund, Special Projects Fund, and Auxiliary Fund) and, further, added both a Reserve Fund and a Debt Service Fund (both to meet statutory state reporting requirements). The primary reason for expanding the number of fund groups was that administrators at the college felt that the two-dimensional framework prescribed by the *HEFM* guidelines (consisting of a fund-group dimension and a separate restriction-category dimension) was both confusing and inappropriate for their needs. Therefore they increased the number of fund groups and defined each as either totally unrestricted or totally restricted, thereby eliminating the need for separate restriction categories.

Restriction Categories. All of the institutions incorporated the *HEFM*-defined restriction categories into their systems, although the community college built restrictions into its fund-group definitions (as described above). In two institutions, the *HEFM* restriction definitions resulted in a considerable reallocation of dollars among fund groups, because those institutions had traditionally used quite different definitions of restricted and unrestricted funds. One institution in particular had to reallocate all "designated" funds from restricted fund groups to unrestricted fund groups.

Accrual Accounting. Most of the institutions surveyed follow a modified version of accrual accounting. One institution records expenditures when incurred, except for student loans, which are charged to expenditures when disbursed. In a second institution, prepaid expenses are not recognized. Otherwise, all of the surveyed institutions use accrual accounting for year-end reporting. One institution handles its daily accounts-payable transactions on an accrual basis as well.

Revenue and Expenditure Categories. The *HEFM* guidelines specify a set of categories for Current Fund revenues and expenditures in which revenues are classified by *source,* and expenditures are classified by *functional use.* One institution had not yet implemented the *HEFM* revenue categories, although it expected to adopt and use them in the near future. The community college used the *HEFM* revenue categories as a starting point for the development of a hierarchical system of major revenue groups and subgroups that better met its particular needs. The major groups defined are Federal Sources, Local Sources, State Sources, Tuition and Fees, and Other Sources. Within each of those major categories, at least three subcategories were established.

All of the institutions adopted the *HEFM* expenditure categories, although some modified those categories as well. A major research university modified them to more closely approximate the programmatic categories described in the NCHEMS *Program Classification Structure.* The community college used the definitions of the *HEFM* expenditure categories for the most part but renamed some of the categories to better suit its own particular needs (for example, the Academic Support category was renamed the Instructional Support Services category; the Scholarships and Fellowships category was renamed the Financial Aid category).

All of the institutions incorporated into their systems additional identifiers for the classification of expenditure data. Some of the more common identifiers used include objects of expenditure (salaries, travel, equipment), identifiers for departments, schools, or divisions, and an identifier for the account number from the previous accounting system. Other identifiers used by many of the institutions include a funding-agency identifier and a project identifier for government grants and contracts. These additional identifiers, while not specified by the *HEFM* guidelines, provide the institutions with the capability to organize data in different ways to yield the kind of data they need for their own planning, budgeting, and management purposes.

Implementation Process

The processes used in implementing the *HEFM* guidelines varied considerably among the institutions. Because several of the institutions were part of a statewide system, their implementation process began with an assumed chart of accounts. Thus their problem was primarily one of data processing rather than data definition. In other institutions, the implementation process involved both defining the chart of accounts as well as determining how to best collect, process, and report the data in that format. In learning about the process used in each of the institutions, the following questions were asked:

1. What was involved in your institution's implementation of the *HEFM* guidelines?
2. Who was involved in implementing the guidelines?
3. How long did implementation take, and how much staff time and money was involved?

WHAT WAS INVOLVED

In two of the institutions, the implementation of the *HEFM* guidelines was part of the installation of a totally new financial accounting system. Therefore the implementation of those guidelines was a relatively minor problem when compared to the total installation process.

The previous system of two other institutions had accounts defined in such a way that the changeover to the *HEFM* guidelines was not difficult. In fact, both institutions found that a reaggregation and reshuffling of accounts in accordance with the *HEFM* guidelines was the largest task in the changeover. In the smaller institution, this re-sorting of existing accounts was completed using a set of hand-prepared working papers, while in the larger institution, it involved revisions to the existing software reporting programs. In both institutions, the greatest problem was the identification of the crossover links between existing accounts and the

HEFM categories; compliance with other aspects of the new guidelines once the crossovers had been identified was not a major problem.

One institution used the crossover-table approach to format data in accordance with the *HEFM* guidelines. (This institution implemented the *HEFM* guidelines for reporting purposes only.) The first step in its implementation process was the creation of a crossover table that specified the appropriate links between transactional accounts and the *HEFM* categories. Computer programs were then created that incorporated the crossovers directly into the institution's automated reporting system. This institution used the crossover-table software to reformat transactional accounting data for their annual reports, for HEGIS reporting, and for all budget documents.

The initial task for those institutions that revised an existing accounting system was to evaluate the way in which they collected and reported data (especially the handling of restricted funds) and to look at the link between existing accounts and the new *HEFM* guidelines. In some instances, they found that changes were needed in the way they defined restricted, unrestricted, and designated funds, and that some major adjustments in defining such accounts were necessary. They then examined the links between the data categories they used and the *HEFM* categories; in several instances, only a reshuffling of existing accounts was necessary to comply with *HEFM* for reporting purposes. In one instance, a computerized crossover table was all the institution needed to implement the *HEFM* guidelines for its purposes.

WHO WAS INVOLVED

In almost all of the institutions surveyed, implementation of the *HEFM* guidelines was a cooperative effort between the institution's financial accounting staff and its computer/systems-analysis staff. Specification of persons involved in each institution's implementation process usually depended on how the staff were organized, but more importantly, it depended on the institution's perception of the type of problem presented by the *HEFM* implementation.

In several institutions, the *HEFM* implementation was seen primarily as an accounting-system problem. Therefore the project was carried out by the financial staff (controller, chief accountants, budget officer) and various systems analysts and computer programmers.

In other institutions, the problem was perceived more broadly as one of how best to create a new type of financial information to support all aspects of the institution's planning and management. In these institutions, a much broader cross section of institutional administrators and staff was brought into the process, if only in an advisory capacity. For example, in one institution surveyed, the operational task of implementing the guidelines was carried out by a project team staffed by the finance/accounting personnel and the systems analysts/programmers. However, this team worked closely with an advisory committee comprising the institution's treasurer, budget director, grants and contracts administrator, administrative assistant to the academic provost, and a representative of the budget/finance committee of the institution's governing board. This advisory committee gave the project team valuable advice regarding the kinds of financial information it wanted and needed. Equally important, however, was the feeling that this committee's involvement served as an educational experience for its members, who are also important users of the *HEFM*-formatted data. In addition, the committee's involvement helped ensure greater institutionwide acceptance of the new financial accounting/reporting system when it was completed.

TIME AND MONEY INVOLVED

It was not possible on the basis of the response of the institutions to generalize about time and costs for implementing the *HEFM* guidelines. For those institutions that implemented a totally new accounting system, the costs of that installation were generally considerable. However, the difference in the cost of incorporating the *HEFM* guidelines or any other set of guidelines was almost negligible. For those institutions that adapted an existing system specifically to comply with the *HEFM* guidelines, a variety of time and cost figures were given in response to the question. It took the institution that incorporated the crossover table directly into its reporting system approximately 1 month of programming to build the crossover tables. A second institution, which drafted an entire accounting manual as part of the process, used one person full-time for approximately 15 months. This institution essentially re-sorted all existing accounts into the *HEFM* format and wrote an accounting manual to document what it had done. Another institution, which had to re-sort its existing accounts, required approximately 60 to 80 hours of staff time for the task.

All of these figures for time are highly dependent on the type of institution, the size and complexity of the accounting system, and the kinds of changes each institution made in implementing the *HEFM* guidelines. It is fair to say, however, that the process can be either fairly complex (involving a large number of people and expenditures), or it can be much simpler (requiring only the specification and incorporation into the system of the linkages between the old and new accounting/reporting guidelines). Both costs and time involved will depend on where along this spectrum of complexity the institution chooses to implement the *HEFM* guidelines.

Part III

Accounting Data and Program Data

7

Relation of *HEFM* Functional Expenditure Categories to *PCS* Program Categories

Background

The collection and use of program information for governmental and nonprofit enterprises, including postsecondary education, have enjoyed much attention in recent years. The *Higher Education Finance Manual (HEFM)* describes one structure for classifying financial information in a program format. The NCHEMS *Program Classification Structure (PCS)* describes another such structure. Most of the program structures in postsecondary education are based on or adapted from these two structures. The similarity between the *HEFM* functional classification structure and *PCS* and the widespread use of the *HEFM* guidelines as the basis for financial accounting and reporting systems indicate the importance of discussing the evolution of *HEFM* and *PCS* and their relationship to each other. This chapter is intended to describe for the data user the similarities and differences between the expenditure categories described in *HEFM* and the programmatic categories outlined in the NCHEMS *Program Classification Structure.*

The *Report of the Joint Accounting Group* (JAG), completed in 1974, culminated a cooperative effort by NCHEMS, the American Institute of Certified Public Accountants (AICPA), and the National Association of College and University Business Officers (NACUBO). The revenue and expenditure categories recommended by JAG are now considered to be part of the generally accepted accounting principles (GAAP) for postsecondary-education institutions and have been incorporated in the NACUBO *College and University Business Administration*—1974 (*CUBA* '74), the AICPA *Audits of Colleges and Universities*—as revised (the *Audit Guide*), and the NCHEMS *Higher Education Finance Manual (HEFM).* Since publication of the original report of the Joint Accounting Group in 1974, an NCHEMS/NACUBO committee has refined and clarified the definitions of the expenditure categories. This set of expenditure categories (referred to in this document as the refined *HEFM* functional classification structure), the first edition of the *Program Classification Structure (PCS I),* and the second edition of the *Program Classification Structure (PCS II)* are the main subjects of this chapter.[2]

The *PCS I, PCS II,* and the *HEFM* functional classification structure are all program structures for the organization of data about postsecondary education. Since the program structures in the three documents are based on the same enterprise, the data categories described in those structures are very similar on the surface. However, it is important to remember that *PCS* and *HEFM* were developed for different purposes and thus are distinct in several ways.

The relationship between *PCS II* and the *HEFM* functional classification structure is best understood by considering three distinct aspects of the relationship: *concept, timing,* and *data conversion.*

Concept

The fundamental difference between the *PCS II* program structure and the *HEFM* functional classification structure stems from their differing purposes. *PCS II* was designed as a prototypical program structure for postsecondary education. *HEFM,* on the other hand, was designed as a standardized financial reporting structure. While *HEFM* is based on a program structure, it has been *adapted* to meet the special needs of financial data collection and reporting.

All program structures are intended to allow activities to be linked to objectives by providing a framework that links the contribution of various activities to the accomplishment of objectives. Using a program structure, the activities of the organization can be assigned to one or more program categories and thereby related to the organizational goal(s) associated with that category. As a *prototypical* program structure, *PCS II* reflects the programs carried out by the entire postsecondary-education sector. Therefore an individual user may wish to adapt the *PCS II* prototype structure to reflect the particular programs of the institution or the particular purpose served by the information. In fact, one might view the *HEFM* categories as an adapted version of the *PCS*-prototype structure. The *HEFM* adaptation is specifically designed to provide an easier way to collect and display financial accounting data in a programmatic format.

2. The refined *HEFM* expenditure categories may be found in the *Higher Education Finance Manual: Data Providers' Guide* and in *Administrative Service,* supplement 5:2:1. *PCS II* categories are set forth in Douglas J. Collier, *Program Classification Structure,* 2nd ed. (Boulder, Colo.: NCHEMS, 1978).

In its purest program sense, the *PCS II* structure specifies that *activities* should be classified on the basis of the actual or primary intent of the institution in carrying them out. Individual activities should be analyzed to determine the goal toward which they are directed and then assigned a place in the program structure accordingly. In some cases, such an analysis can become quite complex and may even require the allocation of individual activities or resources to several different categories in the program structure. Faculty activities are a prime example of activities that are often classified in several *PCS* categories. Faculty activities serve a number of institutional objectives, including instruction, research, public service, academic administration, course and curriculum development, and academic personnel development. In following the classification procedures set forth in *PCS II*, the user must determine, based on the intent of each activity, which faculty activities serve which objectives. This procedure is best exemplified in the assignment of departmental research. According to *PCS II*, one must determine whether departmental research is designed to aid instruction, produce research outcomes, or further the professional development of the faculty. The activity can then be assigned accordingly. This approach differs from the outline approach for classifying expenditures in the *HEFM* structure, which specifies that the intent of the related *organizational or budgetary units* should be considered. For example, *HEFM* assigns all expenses of instructional departments to the Instruction program, unless they are specifically budgeted to another function. In this way, the procedures for the *HEFM* structure approximate the programmatic considerations expressed in *PCS II*, while involving considerably less effort.

While a program structure relates activities to objectives, an accounting structure is designed to aid management in exercising internal control, in providing for external disclosure, and in fulfilling its fiduciary responsibilities. Historically, accounting systems have been built on organizational units and other units of budgeted expenditures. Building an accounting system on such components as organizational and budgetary units allows management to monitor the performance of each unit under its control, relate expenditures to the budgetary process, and deal with day-to-day decisions about these units.

The *HEFM* expenditure categories represent a particular kind of accounting structure in that they provide a standard program-related framework for the organization of financial data. While the *HEFM* categories are built on budgetary-unit expenditures, the highest level of aggregation in the *HEFM* structure reflects the programs institutions carry out to accomplish their objectives. The *HEFM* structure adapts many of the attributes of program structures by considering fiscal or operational factors.

- *HEFM* uses definitions that facilitate the collection of operational financial data. As an accounting structure, the programs in *HEFM* are defined as standard aggregations of organizational and budgetary units rather than as a collection of activities directed toward a common goal. For example, the

Instruction category in *HEFM* is defined as the aggregation of the accounts for the instructional departments (less any accounts specifically budgeted as noninstructional). No attempt is made to allocate the general activities of an academic department to its many objectives (instruction, research, public service). While this more generalized approach may make the data less sensitive in assessing the programs of an institution, it nonetheless makes the collection of accounting data far less complicated. Moreover, by focusing on organizational and budgetary units, management can specify the assignment of each account to a particular category. These assignment practices can then be standardized among institutions through the use of a look-up table or other such devices. Finally, basing an accounting system on aggregations of organizational units rather than on activities allows for internal fiscal controls and managerial accountability.

- *HEFM* provides for fund-accounting concepts in its functional classification structure. The Mandatory Transfers subcategories are included in the *HEFM* structure, not because they are considered programs, but rather because their inclusion allows institutions to account for, and separately identify, an important fund-accounting transaction (that is, the transfer of monies from the Current Fund to another fund group).
- *HEFM* highlights important planning and management units in the functional classification structure. For example, the Auxiliary Enterprises category in *HEFM* is defined on the basis of organizational and financial considerations rather than programmatic distinctions. That is, auxiliary enterprises are those activities that provide a service to students, faculty, or staff and are *financially self-supporting*. Also, auxiliary activities are considered separately from educational and general activities in day-to-day decisionmaking. Hence they are separately identified in *HEFM* regardless of the institutional objectives that they serve. In *PCS II*, on the other hand, activities organized as auxiliary enterprises are assigned to categories based on their objectives—to serve students (Student Services) or faculty and staff (Institutional Support)—without regard to their organizational status as auxiliary enterprises. The Hospitals category further exemplifies how the *HEFM* categories differ from those in a pure program structure. Hospitals are segregated in *HEFM* because they usually are organizationally separate from the rest of the operations of the institution. In *PCS II*, the activities that take place in hospitals are assigned to categories based on the goals of public service, operation and maintenance of plant, and so on.
- *HEFM* provides a link between expenditures and the budgetary process. A number of categories in the *HEFM* structure are defined according to whether expenditures are *separately budgeted or organized* for that purpose. Examples are Individual and Project Research, Community Service, Course and Curriculum Development, and Special Session Instruction.

Timing

The first edition of the *PCS* was published in 1972, culminating development begun in the late 1960s[3]; *HEFM* appeared in January 1975. In 1978, the *HEFM* guidelines were refined, and shortly thereafter, *PCS II* was published. This recitation of chronology serves not to suggest that *HEFM* is an intermediate version of the *PCS* or vice versa, but to remind us that our perspective on postsecondary education has changed significantly during this period. The program structures of *PCS I*, *HEFM*, and *PCS II* reflect the then-current thinking of the postsecondary-education community. *PCS I* and the original *HEFM* expenditure categories were developed primarily to describe a world of *higher education* characterized by the 18 to 22-year-old student pursuing a postsecondary degree on the campus of a college or university. *PCS II* and the refined *HEFM* guidelines were developed to address the broader concept of *postsecondary education*. Educational planners and managers expressed increased interest in the proprietary sector, adult and continuing education, nontraditional programs, and other programs not considered part of traditional higher education. *PCS II* and the refined *HEFM* structure also reflect several additional years of experience with program structures for postsecondary education and more intensive consideration of selected program areas. The following paragraphs will briefly discuss some of the changes between *PCS I* and *HEFM* and then trace the evolution of thinking about postsecondary education between the publication of *HEFM* and *PCS II* and the refined *HEFM* guidelines.

PCS I TO *HEFM*

A redefinition of *instruction* was the primary change in thinking about postsecondary education that occurred between the publication of *PCS I* and *HEFM*. In *PCS I*, instruction was defined strictly as formal educational activities enabling matriculated students to earn credit toward a postsecondary degree or certificate. Activities related to noncredit instruction were defined as Student Services or Public Service, depending on whether they were oriented to matriculated students or the general community. Later, *HEFM* took the position that all instructional activities sought the same basic outcome—producing educational change in the learner—and therefore should be classified as part of Instruction. Distinctions in the kind of learner or the ultimate purpose of the instruction (degree or nondegree) were considered to be descriptors of instruction. This rethinking resulted in the inclusion of both Community Education activities and Preparatory and Adult Basic Education activities in the Instruction program in *HEFM*.

Two other important changes in thinking about higher education are reflected in the *HEFM* structure. First, *HEFM* recognizes the desirability of identifying

3. Warren W. Gulko, *Program Classification Structure*, Technical Report 27 (Boulder, Colo.: NCHEMS, 1972).

institutional resources devoted to student financial aid. Therefore the Scholarships and Fellowships category was created. A second change involved a new perspective on teaching hospitals. In *PCS I,* hospitals were viewed as a support operation to the instruction and research functions of the institution, that is, they were considered part of the Ancillary Support subprogram. *HEFM* expresses the view that hospitals serve important public-service objectives as well as support the instruction and research programs. Therefore hospitals are identified separately in *HEFM.*

While there are other differences between *PCS I* and *HEFM,* they can be attributed primarily to the special purpose of *HEFM* as a structure for the collection of operational financial data.

HEFM TO *PCS II* AND THE *HEFM* REFINEMENTS

Although they had existed for many years, the large proprietary and nondegree sectors of postsecondary education were not a major concern of education planners and managers during the years of tremendous expansion of higher education. However, between the publication of *HEFM* and of *PCS II* and the *HEFM* refinements, many planners and managers began to examine postsecondary education as a whole rather than examining the higher-education sector and other sectors separately. In part, this broadened perspective was brought about by a tremendous expansion of, and refocusing on, nondegree education. The expansion has occurred both in nontraditional educational settings (museums, labor unions, public libraries) and in traditional institutions of higher education. Among traditional institutions, community colleges have been important, but not exclusive, developers of this idea; many universities and colleges now have extensive nondegree programs as well. *PCS II* and the refined *HEFM* guidelines reflect this increased importance of nondegree programs.

PCS II established the Instruction subprograms (1.4—General Studies; 1.5—Occupation-related Instruction; 1.6—Social Roles/Interaction Instruction; 1.7—Home and Family Life Instruction; and 1.8—Personal Interest and Leisure Instruction) to identify and differentiate among these nondegree programs. The refined *HEFM* guidelines aggregate these categories into a single subcategory, Community Education, but use the same basic definition for nondegree instruction.

A second factor in the reorganization of the Instruction program in *PCS II* and the refined *HEFM* guidelines has been a redefinition of subdivisions for Instruction. *PCS II* and the refined *HEFM* guidelines reflect the belief that degree instruction, nondegree instruction, and preparatory instruction are oriented to different objectives in the goal structure of the Instruction program. The subdivisions of degree instruction in *PCS II* are defined by the kind of degree being pursued: General Academic (1.1) and Vocational/Technical (1.2), that is, vocational programs leading to an associate degree or certificate only. While the kind of degree is the differentiating criterion, this criterion has been applied by differentiating degrees on the basis of HEGIS discipline aggregations (General Academic Instruction is defined as HEGIS categories 0100 through 4900, while Vocational/Technical Instruction is HEGIS 5000 through 5500). The subdivisions within nondegree instruction are based upon the "type" of instruction being offered (family-related, personal interest, community/social roles, occupation-related, general nondegree studies). Finally, preparatory instruction, which is a prerequisite for participating in some formal degree programs, is the third objective used to describe activities within Instruction.

This reorganization of instructional activities in *PCS II* is similar to that in the refined *HEFM* structure. The *HEFM* subcategories General Academic Instruction and Vocational/Technical Instruction are defined as aggregations of HEGIS disciplines, which in practice are generally related to academic departments. The *HEFM* subcategory Community Education is similar to an aggregation of *PCS II* subprograms 1.4 to 1.8. The *HEFM* subcategory Preparatory/Remedial Instruction is the same as the *PCS* subprogram Requisite Preparatory/Remedial Instruction (1.3). Finally, the *HEFM* subcategory Special Session Instruction, because it reflects budgetary distinction, is the only category in *HEFM* having no parallel in *PCS II*.

A number of minor differences between *HEFM* on the one hand and *PCS II* and the refined *HEFM* guidelines on the other also reflect changes in thinking about postsecondary education and further consideration of various program areas over the past several years.

1. At a number of institutions, public broadcasting has become a major function with its own objectives. Accordingly, a separate subprogram within the Public Service program was established in both *PCS II* and the refined *HEFM* structure to identify these activities.
2. Academic Administration activities and Personnel Development activities increasingly have been seen as serving different objectives and therefore were split into two subprograms in *PCS II* and the refined *HEFM* structure.
3. A Student Services Administration subprogram was established in *PCS II* and the refined *HEFM* guidelines to correct an oversight in earlier structures.
4. Student Records was established as a separate subprogram in *PCS II* within the Institutional Administration program and in the refined *HEFM* guidelines within the Student Services category to reflect the belief that these activities have a purpose—supporting the orderly management of the institution—different from that of Student Admissions.[4]

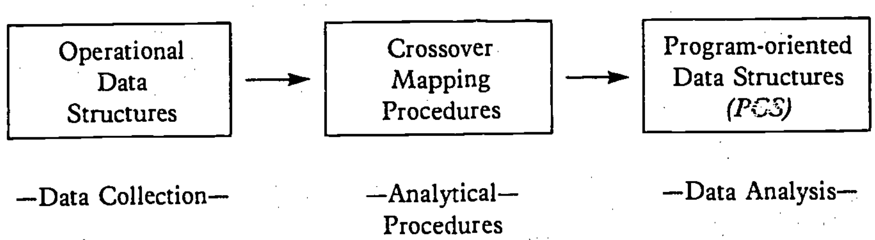
4. Although the student-admissions and the student-records functions are classified within Institutional Support in *PCS*, they were included within Student Services in the *HEFM* structure to maintain the integrity of financial data collected at the major category level of detail for the last several years.

5. The categories of General Administration and Logistical Services have been reoriented in *PCS II* and the refined *HEFM* structure to reflect the increased importance of Administrative Computing Support (a subprogram in its own right in *PCS II* and the refined *HEFM* guidelines) and the belief that the two former subprograms, General Administrative Services (less administrative computing) and Logistical Services, are not much different in the kind of support they provide to the institution as a whole.

Data Conversion

The final dimension in the relationship between *PCS II* and *HEFM* relates to the process of conversion between accounting and program data. The *HEFM* structure uses a programmatic format to disclose financial data on a more comparable basis than is possible using internal organizational units and to allow for an easier reformatting of accounting data into other program structures, such as the *PCS II* format. As already noted, *HEFM* provides an operational data system with financial data in a precise and stable format. The analyst can use the data presented in a *HEFM* format as the base for any number of analytical applications, including their translation into the *PCS II* format. As program concerns and perspectives shift, the uses of the prototypical program structure described in *PCS II* may change, but basic financial data collected in the *HEFM* format will still be, within limits, capable of serving as a reliable base for the generation of program data. The following excerpt from the statement of principle that guided the revision of *PCS* describes the relationship between *PCS* and *HEFM* data:

> Most data formats are data specific in that they are designed to serve the unique characteristics of one particular type of information (for example, personnel data, financial data); therefore they have limited utility for analyses that require the integration of several different kinds of data. The *PCS* helps to overcome this limitation. In a cost analysis, for example, information about people, finances, facilities, time, and so forth, must be integrated, but these data cannot be linked unless there is a single data framework that accommodates all of them. By focusing on programs, the *PCS* provides the analyst with a format for conducting such an analysis.
>
> The role the *PCS* plays in analysis is as follows:



This diagram points out that, by definition, analytical data and operational data are different. Operational data are collected on an ongoing basis for the institution's operations (such as the accounting system or a student-data system) and are usually classified in categories that relate directly to organizational units within the institution. Analytical data (of which program-oriented data represent one kind) usually are obtained after certain analytical procedures (such as crossover or mapping procedures) are performed on the operational data. For example, a faculty-activity analysis can be used to further explain the objectives served by the resources used in various academic departments, thereby resulting in analytically derived program data. While the *PCS* often is used to display operational data, it should be viewed primarily as a format for the display of program data that are obtained through the use of analytical procedures (Collier 1975, p. 6.).

Considerable attention was given in the development of *PCS II* and the refined *HEFM* guidelines to making the conversion of data from *HEFM* categories to the *PCS II* programs as simple as possible, given the different natures of the structures.

Conclusions

While *PCS II* and the *HEFM* functional classification structure have similarly named programs and subprograms, and while they were designed to ease the translation of operational data to program data, fundamental conceptual differences in design will remain as long as both accounting data and program data are needed. Users of the two structures should be constantly aware of the distinctions and should carefully consider which structure best suits their needs. However, as the evolution of postsecondary program structures and the accumulation of experience continues, we can expect that the responsible parties will update the program structures, while keeping in mind ways to make the translation from one structure to the other easier and more accurate.

HEFM-PCS Crosswalk

In order to illustrate the concepts discussed above and to provide a guide for converting programmatic accounting data in the *HEFM* format to program data in the *PCS* format, a *HEFM-PCS* crosswalk has been compiled. This crosswalk shows the *PCS* subprograms to which expenditures from each *HEFM* subcategory should be assigned. The crosswalk does not work in reverse; that is, it should not be used to convert data in the *PCS* format to the *HEFM* format.

Four main operations must be done to effect the transformation:

1. *Allocation of faculty activities to various* PCS *subprograms. HEFM* assigns all faculty activities to the Instruction category, unless they are specifically identified as something else (Research, Public Service). However, since the faculty does carry out activities that are paid for out of instructional budgets but that support other institutional programs, those other objectives are recognized in *PCS*, and instructional unit expenditures are reallocated as appropriate.
2. *Assignment of the* HEFM *Auxiliary Enterprises subcategories to the appropriate* PCS *subprograms. HEFM* identifies auxiliary enterprises separately, because they are an important organizational and financial entity. *PCS*, on the other hand, assigns such activities to the various institutional programs whose objectives they support.
3. *Assignment of the* HEFM *Hospitals subcategories to the appropriate* PCS *categories. HEFM* identifies hospitals separately, because they are an important organizational and financial entity. Again, the *PCS* assigns such activities to the institutional programs whose objectives they support.
4. *Assignment of expenditures in the* HEFM *transfers categories.* There are no categories in *PCS* comparable to the *HEFM* transfer categories, because *PCS* deals with institutional activities rather than with financial transactions as *HEFM* does. If *PCS* is being used to display financial information and it is important that all financial transactions be included, the *HEFM* subcategories associated with mandatory and nonmandatory transfers should be used in the display.

HEFM Category	Related Revised *PCS* Category	Remarks
Instruction		
• General Academic Instruction	1.1 General Academic Instruction 2.2 Individual or Project Research 3.3 Community Services 4.6 Academic Administration 4.8 Academic Personnel Development	While the *HEFM* subcategory includes all formally organized activities of faculty members in this area, *PCS* separates noninstructional faculty activities. These activities (departmental research not serving instructional objectives, departmental administration) are assigned to the other *PCS* categories listed.
• Vocational/Technical Instruction	1.2 Vocational/Technical Instruction 2.2 Individual or Project Research 3.3 Community Services 4.6 Academic Administration 4.8 Academic Personnel Development	While the *HEFM* subcategory includes all formally organized activities of faculty members in this area, *PCS* separates noninstructional faculty activities. These activities (departmental research not serving instructional objectives, departmental administration) are assigned to the other *PCS* categories listed.
• Special Session Instruction	1.1 General Academic Instruction 1.2 Vocational/Technical Instruction 1.3 Requisite Preparatory/Remedial Instruction 1.4 to 1.8 Community Education	Special Session Instruction should be distributed on the basis of the intent of the individual instructional offerings provided during the Special Session.

HEFM Category	Related Revised *PCS* Category	Remarks
• Community Education	1.4 General Studies (Nondegree) 1.5 Occupation-related Instruction (Nondegree) 1.6 Social Roles/Interaction Instruction (Nondegree) 1.7 Home and Family Life Instruction (Nondegree) 1.8 Personal Interest and Leisure Instruction (Nondegree) 2.2 Individual or Project Research 3.3 Community Services 4.6 Academic Administration 4.8 Academic Personnel Development	Community Education should be distributed among the *PCS* subcategories (1.4 to 1.8) on the basis of the intent of the individual courses. While the *HEFM* subcategories include all formally organized instructional activities of faculty members, the *PCS* separates out those faculty activities that do not serve instructional objectives. These activities (departmental research not serving instructional objectives, departmental community service, departmental administration) are assigned to the appropriate *PCS* categories listed.
• Preparatory/Remedial Instruction	1.3 Requisite Preparatory/Remedial Instruction 2.2 Individual or Project Research 3.3 Community Services 4.6 Academic Administration 4.8 Academic Personnel Development	While the *HEFM* subcategory includes all formally organized activities of faculty members in this area, the *PCS* separates noninstructional faculty activities. These activities (departmental research not serving instructional objectives, departmental administration) are assigned to the other *PCS* categories listed.
Research		
• Institutes and Research Centers	2.1 Institutes and Research Centers	
• Individual or Project Research	2.2 Individual or Project Research	The *PCS* categories also include departmental research activities, when those activities are conducted to create research outcomes.

HEFM Category	Related Revised *PCS* Category	Remarks
Public Service		
• Community Service	3.3 Community Services	The *PCS* category includes departmental public-service activities that would generally be classified within Instruction in the *HEFM* definitions.
• Cooperative Extension Service	3.4 Cooperative Extension Services	
• Public Broadcasting Services	3.5 Public Broadcasting Services	
Academic Support		
• Libraries	4.1 Library Services	
• Museums and Galleries	4.2 Museums and Galleries	
• Educational Media Services	4.3 Educational Media Services	
• Academic Computing Support	4.4 Academic Computing Support	
• Ancillary Support	4.5 Ancillary Support	
• Academic Administration	4.6 Academic Administration	The *PCS* category also includes those informally organized departmental administrative activities that *HEFM* includes within Instruction.
• Academic Personnel Development	4.8 Personnel Development	The *PCS* category also includes departmental research when conducted to enhance the professional development of the faculty member.
• Course and Curriculum Development	4.7 Course and Curriculum Development	
Student Services		
• Student Services Administration	5.1 Student Service Administration	

CHAPTER V

CONCLUSION

The role of visuals as a learning aid is undeniable; studies over the past few years have conclusively established that. What is still interesting researchers is the way visual material is absorbed, the ways in which visuals should be used, and how they should be designed, developed and presented, and research already shows that their usefulness notwithstanding, they should be used intelligently with a realistic appraisal of their uses. Clearly they are not endlessly applicable, nor is one type of visual useful in all circumstances.

The variables are many. The subject matter influences the kinds of visuals used: geography, for example, is likely to use a large number of maps and graphs. Similarly the behavioural objective will have an effect: whether it is factual or visual information which needs to be understood, explained or rehearsed, and what needs to be recalled from the experience - concepts or facts.

The students themselves influence not only what is likely to be recalled but what form the visuals should take. Children, for example, learn differently from adults who, because of their greater experience and knowledge, learn concepts with the pictures. Mental ability has been examined in its bearings on learning from visuals, and it appears that high IQs learn readily from either the visual or verbal approach. Lower IQs achieve better from visual aids than they do from verbally emphasized work as long as those aids are keyed to the level of the students. Indeed, visuals, in these circumstances, can act as excellent motivational devices.

Motivation is another variable in the effectiveness of visual education, as it is in most educational circles. Students learn any content matter much better when they are interested in what is before them. For this, visuals can be both a cause and an effect. Visual materials play an important role in raising motivation and interest, and the information they contain is better transmitted when motivation and interest are high. This situation is achieved, too, when the visuals are part of a programme which is seen by the students to be valid and attuned to their needs, a factor especially true of adults, and when the visuals are well incorporated with the material being taught.

Cultural factors may affect what students interpret as important and what they see as worthwhile learning techniques. In addition, such factors will influence what they absorb from a visual. Objects and concepts which are not in their own culture or which that culture underemphasizes may be misinterpreted, or, indeed, not noticed at all in visual materials. Visuals can be very effective in this context in realigning cultural acceptance patterns.

The way in which the illustrations are presented is yet another variable. Are they to be in a programme paced by the teacher or one where the students work at a more leisurely or self-controlled pace? Whichever is chosen, the matter of exposure time becomes increasingly important, as numerous studies have shown. A system such as charts allows the students to refer to the visual at any time they need. So, too, do textbook and workbook illustrations. Slides and transparencies may have much the same advantage if the students are given enough viewing time. Films, television and the like are excellent for the presentation of concepts involving movement, but frame time is externally dictated, and the speed at which viualized information passes before students may become a cause of interference.

Interference must be kept in mind when considering what form the visuals will take, and here one should give attention to the ideas of design and realism. All visuals should be clear to all students which means that their size, clarity, spacing and color are all important. It sounds unnecessary to say that a picture in education should not be too small and should not be too large. If it is too small, many details will be indecipherable and hence confusing; if it is too big, a sense of unity will be sacrificed as students, in trying to scan the whole picture, will tend to have their attention taken by a small section. Spacing is part of this concern as well. When parts of the visual are spaced well, the scanning eye moves smoothly and logically from one to another.

The matter of complexity or simplicity is a feature which is in the context of interference. As was noted in Chapter II the realism continuum does not reflect the "learning continuum" and increasing detail tends, instead, to decrease the teaching potential of the visual. However, this remains an inconstant feature. Dwyer found in his study that realistic, colored photographs were useful in certain proscribed areas of a lesson on the part of the heart. All the same, on the whole, studies suggest that less complex illustrations are more readily understood and better for the transfer of information.

In the context of realism should be considered the matter of color. Again it is hard to be definite in any conclusions for sometimes it is true that black and white illustrations can be extremely effective - the contrast is strong. On the other hand, color can be important for clarification, for attention-getting, for visibility considerations, for the interpretation of relationships and for the subtle transmission of attitudes. Children tend to react to color, especially strong color, more definitely than adults who are accustomed to the symbolism of black and white and the ideas it transmits, but all people can absorb a great deal from color. Wise use of color can add to the learning experience; undisciplined use adds nothing and can become an overload, resulting in a decrease of understanding.

Using the visuals requires cueing methodology. Adults in particular need to feel in touch with the work being presented and prefer to be told of the learning objectives in front of them. This has the advantage of focusing their attention and receptive concentration. Questions have a similar effect, written or oral, and are also vital for follow-up recall. Printed material, such as arrows, may continue this role. This rehearsal is important to the retention of learned material. All of these gambits, including patches of color in an otherwise black and white illustration, are further variables.

What this points to is that there is no single approach to visuals, and that there are no hard and fast rules for their use. The variables are vitally concerned in what is right for one situation and what is right for another; in order to adapt a visual for another use it may be necessary to change only one or two of these aspects. Educational effectiveness is dependent upon small things and cannot be made constant.

The variables do not change the fact that visuals are useful but they do mean that commercially made products can seldom fit this fluctuating mould. They cannot take into account the varying needs of students in different learning environments. The whole idea of visuals is that they should respond to just those environments and the needs assessed on an individual basis, that they should deal with learning problems and learning situations which may be unique to an age group, a subject, a cultural attitude or a teaching form. Here lies the great strength of the teacher-made visual aid. No matter what the artisti skills of the teacher, it is he or she alone who recognizes and understands the variables. Only the teacher can produce visual materials which are that immediate response to the situation, and only those are effective teaching aids.

The teacher, then, should not be daunted by the artistic requirements. Experience teaches a lot of ways to deal with these needs, and furthermore brings more ideas. There is n ed to turn to another person to translate ideas, for this introduces the potential interference of a third party and his/her interpretations. Necessity is the mother of invention, and it is that which makes teacher-made visual aids a continually vital part of the ESL classroom.

APPENDIX I

Sample Passage for Listening Comprehension with Visual

I SIMPLE

(a) This woman is tired. She has been shopping most of the day. She is wearing a brown coat and on her head she has an orange hat. She is carrying two bags.

(b) This girl has been at school but now she is going home with her mother. She is wearing blue jeans, a blue hat and a red sweater.

II SLIGHTLY HARDER

(a) Mark Booth's waiting for the bus and he's been waiting quite a while. He's cold so he's put his hands in his pockets to keep them warm. He's wearing dark jeans and a yellow jacket, as well as a blue hat.

(b) Jane Stevens is talking to a friend of hers. She's going home from school. She's got on a blue coat and red boots and she's a blonde.

III CONVERSATION

/A/ Goodness, aren't these buses slow. If it doesn't come soon, I think I'll drop. I'm so tired.

/B/ I thought you looked rather weary. What've you been doing? Shopping?

/A/ Yes, I thought I'd get a few things I needed. But a few things always turns into a lot more. What have you been doing?

/B/ Oh, I had to take my daughter to the dentist so I picked her up from school. When I left the house this morning it was really quite cold so I put on this quilted coat and my fur hat. Now I'm so hot! I'll be glad to get home and shed everything.

/A/ Ah, I'm just looking forward to getting rid of parcels, hat, coat and shoes and putting my feet up.

APPENDIX II

POSSIBLE SCRIPT FOR ORDER! ORDER!

It was spring. The tree was in bud and flowers were beginning to appear. Within a few weeks, the tree was a mass of blossom in pink and red. As the weeks passed, spring faded into summer. The blooms on the tree gave way to leaves. The days grew warmer and the tree provided shade for people walking in the park and for the children who played under it with their toys in the long days.

Gradually these long days began to shorten. The green leaves began their change to red and gold. Before many more weeks had passed the snow had arrived once more. Winter had returned.

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