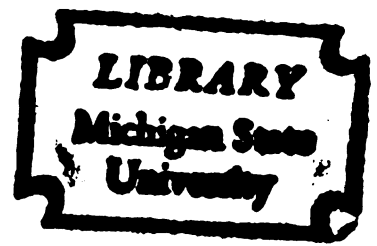


DERIVATION OF PRODUCTIVITY MEASURES FOR
FINANCIAL AIDS SERVICES THROUGH THE
FORMULATION OF COST INPUT AND QUALITY OUTPUT
COMPONENTS

Dissertation for the Degree of Ph. D.
MICHIGAN STATE UNIVERSITY
MARTHA RUTH SMYDRA
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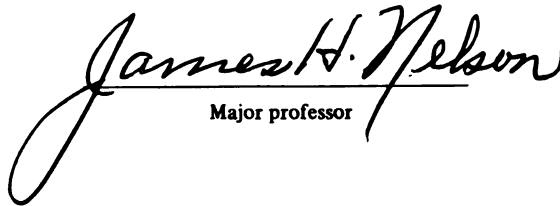
DERIVATION OF PRODUCTIVITY MEASURES FOR FINANCIAL
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presented by

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has been accepted towards fulfillment
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ABSTRACT

DERIVATION OF PRODUCTIVITY MEASURES FOR FINANCIAL AIDS SERVICES THROUGH THE FORMULATION OF COST INPUT AND QUALITY OUTPUT COMPONENTS

By

Martha Ruth Smydra

In this dissertation, descriptive and exploratory in nature, the concept of productivity is applied to higher education as a suggested response to the current demand for accountability. The concept was applied to a service-oriented function rather than to an instructional function, and was restricted to a single department rather than related to an entire institution. Specifically, the purpose of this dissertation was to derive productivity measures for financial aids services through the formulation of cost input and quality output components. A variety of procedures were implemented to demonstrate that productivity measures of financial aids for one academic year can be expressed in terms of three unit measures: number of students served, of awards granted, and of dollars dispensed.

The first procedure was identification of objectives and their attendant criteria upon which to base cost allocation (the input component) and evaluation of achievement (the output component). Because the college serving as example for this study utilized management-by-objectives (MBO), the necessary set of objectives was readily available.

The second procedure was derivation of the cost com-

ponent (the denominator portion of the ratio defining productivity). To each of the objectives identified through MBO, the administrator of financial aids allotted the percentage of his annual time devoted to achievement of the objective. All professional and support staff time was allocated according to the same percentages. The annual budget for the financial aid department was distributed among objectives according to these same percentages, thus providing the actual cost amounts expended to achieve the objectives. Cost to achieve each objective was then expressed in terms of each of the three unit measures.

The third procedure was derivation of the quality component (the numerator portion of the productivity ratio). Both the supervisor of the financial aids director and clients (students) of the financial aids department evaluated level of achievement of each objective identified through MBO. Evaluation instruments were developed based upon the criteria of achievement attendant to each objective. The numerical ratings which resulted served as the quality, or output component, necessary for productivity measurement.

The final procedure consisted of dividing quality output by cost input for each objective, thus obtaining numerical values, i.e., the productivity measures of the financial aids department for one academic year.

After stating limitations which inhibit immediate applicability of productivity to all of higher education, and describing areas of needed research and refinement, the author

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found reason to consider productivity measurement a viable and appropriate approach toward increased accountability. At the present stage of development, the concept was most applicable to a limited segment of an institution, such as student personnel services, rather than to the entire institution. Three reasons for adoption of productivity were stated. (1) When employed as trend analysis, in a time series, productivity measures portray past activity and indicate directions of future implementation. (2) They focus upon departmental activities tending toward greater or lesser efficiency. (3) They can be useful in the model building which will allow an administrator to analyze and understand departmental functions before he/she commits scarce resources to a final course of action.

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CHAPTER I

INTRODUCTION

Conceptual Basis of the Study

Accountability and Evaluation: Focus in Education

Much has been written in recent years concerning the financial problems besetting higher education. Reasons for fiscal shortages are numerous and often interrelated, but any analysis illustrates that costs and obligations are growing faster than readily available resources. Parallel to this dilemma, and in part resulting from it, is a distinct pressure from constituencies, funding agencies, and the public sector for accountability. "At all levels and in various ways higher educational institutions are being called upon to 'account' for their programs and actions, just as other institutions or agencies are expected to justify their operations."¹

As never before, the university is being asked to justify itself--its purposes, its methods of achieving that purpose; its allocation of precious resources; its priorities; its responsibilities to the individual and to society. Yes, from both within and without, institutions of higher education are being called to account.²

¹Rodney T. Hartnett, "Accountability in Higher Education" (Princeton: College Entrance Examination Board, 1971), p. 3.

²Ben Lawrence, George Weathersby, and Virginia W. Patterson, eds., Outputs of Higher Education Their Identification, Measurement, and Evaluation (Boulder, Col.: WICHE, July 1970), p. 3.

This assessment is further affirmed by Browder:

Why should persons employed by the public to provide a service (and given considerable latitude in determining how and under what conditions that service will be rendered) be exempt from standing to account for the results of that service?"³

Accountability has many connotations and applications to higher education. In the financial realm, accountability has become a focal point for the allocation and utilization of monetary resources.

A host of responses and techniques have been employed to monitor the usage of dollars, to better plan its deployment, and to describe the results which have accrued. One response to the call for accountability takes the form of increased emphasis on evaluation; the question being whether greater monetary input does indeed precipitate more and/or better results. Dressel comments: "Both faculty and administration have assumed that high cost and high quality are inevitably linked in lockstep."⁴

There is a great deal of overlap between the concepts of accountability and evaluation as they have been discussed in the literature. Hartnett⁵ distinguishes between the two. First, evaluation is concerned foremost with effectiveness,

³Lesley H. Browder, Jr., Emerging Patterns of Administrative Accountability (Berkeley: McCutchan Publishing Corp., 1971), p. 14.

⁴Paul L. Dressel and Associates, Institutional Research in the University: A Handbook (San Francisco: Jossey-Bass, Inc., Publishers, 1972), p. 214.

⁵Hartnett, "Accountability in Higher Education," pp. 5-7.

whereas accountability is concerned with both effectiveness and efficiency. The latter incorporates the additional concept of capacity to achieve results with a given expenditure of resources. Second, evaluation is a process which has traditionally been undertaken within the organization to achieve positive ends. Accountability, in contrast, brings with it a notion of external judgment, with a possibility of negative result. Third, the orientation of those performing the process differs. Evaluators tend to be psychologists and researchers who are likely to stress the input variables. Accountability personnel, on the other hand, tend to stress output variables, i.e., the efficiency-oriented criteria. Accountability aims at results and assigns responsibility to the institution and its attendant systems.

Both concepts require measurement. Historically, in fact, as measurement technology developed and flourished in this country, "formal evaluation has been very closely associated with the measurement tradition in psychology and education."⁶ An important distinction must be drawn, however. Measurement is a quantitative determination of size, extent, or effects, with no suggestion of judgment. It is a device or technique which is necessarily a component of evaluation; it is the process of obtaining relevant and accurate information one needs to make the judgment regarding merit or

⁶Blaine R. Worthen and James R. Sanders, Educational Evaluation: Theory and Practice (Worthington, Ohio: Charles A. Jones Publishing Company, 1973), p. 2.

worth. Within this determination of worth lies the heart of evaluation. Its goal is "To answer questions of selection, adoption, support, and worth of educational materials and activities."⁷

Viewed from this perspective, evaluation is antecedent to accountability. When an educational administrator is able to determine the worth of an educational procedure or practice, he is equipped not only to consider alternatives, but to assume responsibility for them, i.e., be accountable for his decisions and results. To review Hartnett's distinctions, he can then incorporate the concept of efficiency, he can juxtapose his judgment with external ones, and he can assess results in the light of output variables. In short, evaluation activities are utilized to guarantee greater accountability to his varied constituencies.

The higher education community, of which the community and junior college is a vital component, is not immune to the demand for accountability from its constituents. Research and literature abound with recent attempts to assess and defend the quality of higher education. Much of this effort, however, focuses on the more easily measured, i.e., more discrete, functions of educational institutions, such as numbers of students served, number of credits generated, pre-post measures of various types, and follow-up of graduates. There is need to also attend to those important functions of

⁷Ibid., p. 24.

higher education for which the inputs and outputs are-- while no less important--more difficult to isolate and identify. These are the service and support functions of the institution.

A general service and support function for students is the administration of student personnel services. However operationalized and organized within the institution, they are likely to consist of functions which support the instructional program, respond to student needs, and foster institutional development.⁸ "New systems are being developed to collect accountability data in higher education. Most of this effort, however, is devoted to studying strictly academic functions and very little to student services."⁹ If higher education deems it necessary to establish, fund, and administer such programs, then higher education can be held accountable for them. It is the accountability of this dimension of higher education, as it is practiced in the community college, which offers the setting for this study.

Productivity: Conceptual Basis for the Study

The concept of productivity was not developed in an orderly way under the conceptual umbrella of any single

⁸Junior College Student Personnel Programs Appraisal and Development A Report to the Carnegie Corporation, Max R. Raines, director (Washington, D.C.: American Association of Junior Colleges, November 1965), p. 15.

⁹Robert M. Casse, Jr., Arthur L. Gillis, and John Mullen, "A Student Services Data Information System: An Approach to Process Accountability" (NASPA Management Information Newsletter, February 1974), p. 3.

discipline.¹⁰ Consequently, numerous definitions and interpretations proliferate. Essentially,

Productivity means the return received from a given unit of input. To increase productivity means to get a greater return for a given investment. The concept is most often used in reference to the production of goods . . . Specialists argue over the precise definition of the term 'productivity,' but it is generally assumed to be a ratio of 'output' (or what results from an activity) to 'input' (or the resources committed to the activity.)¹¹

"Stripped to its essentials productivity involves three ideas: input, output, and process, including a ratio to describe the input-output relationship."¹² This ratio is the measure of productivity. From another sector comes confirmation of these components of productivity: "Simply put, productivity management is the amount of resources consumed compared with the volume of products or services produced. In other words: $\frac{\text{output}}{\text{input}} = \text{productivity}$."¹³

To utilize the concept of productivity, one must operationalize the components termed "input" and "output." Neither facet presents an easy task. Inputs are usually measured in terms of total dollars expended or total man-hours consumed. Two interrelated problems are then evident.

¹⁰William Toombs, Productivity: Burden of Success, ERIC/Higher Education Research Report No. 2 (Washington, D.C.: American Association for Higher Education, 1973), p. 5.

¹¹U.S., Department of Justice, Law Enforcement Assistance Administration, Report of the Advisory Group on Productivity in Law Enforcement on Opportunities for Improving Productivity in Police Services (Washington, D.C.: National Commission on Productivity, 1973), p. 1.

¹²Toombs, Productivity, p. 6.

¹³Donald M. Fisk, "Issues in Local Government Productivity Measurement," Public Management 50 (June 1974): p. 7.

First, what should be measured, and second, what can be measured. Further, frequency of data collection can significantly affect the measurement of inputs.

Measurement of outputs too presents operational dilemmas. In the spheres of education and service oriented organizations, outputs are not always tangible, readily quantifiable, or recognizable.

Measuring output in the service activities is difficult because of the absence of a directly quantifiable entity which describes a unit of service. Consequently, various substitute indicators are utilized in the national accounts.¹⁴

Mark states further that "measures of output per unit of capital are not available on a current basis."¹⁵

Compounding the difficulty of obtaining input and output measures are two related problems. First, most data are collected for purposes other than productivity measurement. Definitions and procedures for reporting data may not be consistent with concepts appropriate for productivity measurement. Secondly, input and output are not restricted to quantity alone; the quality variable cannot be ignored. In relation to input, for example, a simple total of hours worked ignores the qualitative aspect of those same hours worked by individuals of varied skills, training, and experience. Some compensation or adjustment must be made in deriving the input

¹⁴U.S., Department of Labor, Bureau of Labor Statistics, The Meaning and Measurement of Productivity, Jerome A. Mark, "Concepts and Measures of Productivity," (Washington, D.C.: Government Printing Office, September 1971), p. 10.

¹⁵Ibid., p. 13.

component.

In relation to output, quality is no less relevant to the final productivity measure.

What is generally lacking is some indication of quality of service. The qualitative factor can dramatically affect the productivity measure; if it is not included, the figures can be misleading.¹⁶

All productivity measures include the components of input and output. These measures, however, can be divided into two major classes, according to the number of inputs being considered.

Ideally a productivity index includes all the inputs and a representation of all the outputs to give 'total factor productivity.' This condition is never achieved and one of two broad modifications is selected. 'One includes those measures which relate output of a producing enterprise . . . to one type of input such as labor, capital, energy, etc. The other includes those which relate output to a combination of inputs extending to a weighted aggregate of all associated inputs.' (Mark 1971, p. 12). So there is total factor productivity and single factor productivity, with actual practice falling somewhere between.¹⁷

The utility and application of a derived productivity measure must be examined. Basically, it is a descriptive tool meant to be utilized in a time series. Productivity measures are employed in a national sense, for example, to indicate and compare economic growth. "The most commonly used measure of productivity relates the total output of goods and services in the private economy, that is, Gross National Product (GNP) to the man-hours of all persons en-

¹⁶Fisk, "Issues in Local Government Productivity Measurement," p. 7.

¹⁷Toombs, Productivity, p. 7.

gaged in the production of those goods and services."¹⁸

Theoretically, a growth in productivity over successive years is a way of increasing the ability of people to do what they want to do. Stein states: "Increasing productivity may thus be regarded as the keystone to an improved standard of life and environment for all of society."¹⁹ It is with this broad purpose in mind that a National Commission on Productivity has been established to find ways of continuing or accelerating the historical rates of productivity gains in the United States.

In a more immediate sense, productivity is often associated--and confused with--notions of effectiveness and efficiency. Higher productivity can be realized in a number of ways: first, input (costs) is held constant and performance (output) improves; second, input is decreased and performance remains constant; and third, increased input is accompanied by increased performance. The productivity measure, therefore, reflects the cost of accomplishing a result. It does not directly indicate the extent to which a goal has been achieved, hence cannot be used as a measure of effectiveness. Rather, "effectiveness is a term applied to the relationship between the output and institutional objectives."²⁰

¹⁸U.S., Department of Labor, Bureau of Labor Statistics, The Meaning and Measurement of Productivity, Herbert Stein, "The Meaning of Productivity," (Washington, D.C.: Government Printing Office, September 1971), p. 1.

¹⁹Ibid., p. 5.

²⁰Alfons Van Wijk and Barbara J. Young, "Objectives,

The productivity measure may, however, be an indicator of efficiency, since it relates output to its related costs.

"Productivity is loosely interpreted to be the efficiency in which output is produced by the resources utilized."²¹

"Ratios between the two [inputs and outputs] in a time series indicates whether a production process is tending toward greater or lesser efficiency."²² In other words, productivity can reflect growth and/or progress; in itself it cannot indicate why that growth has or has not been realized.

Productivity Applied to Higher Education

In a time when financial constrictions are becoming tighter and when demands for accountability are increasing, higher education administrators can apply the productivity concept to advantage. By definition the two concepts are not necessarily linked. Accountability connotes an obligation, however, which productivity can serve. Since productivity necessitates specification of objectives, analysis of cost allocation (input component), and analysis of performance (output component), the accountability obligation to account for deployment of resources and achievement of results is fulfilled. Further, examination of the relationship between input and output yields information necessary for decision-making and justification of budget requests.

Program Structure and Evaluation in Higher Education: An Introduction" (Toronto: University of Toronto, Institute for Policy Analysis, n.d.), p. 20.

²¹Mark, "Concepts and Measures of Productivity," p. 7.

²²Toombs, Productivity, p. 5.

Dressel summarizes the impact of productivity and its relationship to accountability:

Productivity reflects the effective management of resources, processes, and organization to achieve specified objectives.

Productivity is constructive, not destructive; it is measured by the relation (difference or ratio) between the value of the original and the value of the new. The basic task of accountability programs therefore, is the assessment of productivity by some procedure.²³

Although the use of productivity measurement has been historically associated with other dimensions (e.g., economics, agriculture), transference to higher education is realistic. Some steps toward implementation, described by Wilson and Finz in Public Management,²⁴ illustrate the potential transfer across disciplines.

1. identification and definition of goals--not a description of action, but the result, state, or condition to be achieved by the action
2. development of specific targets or objectives which describe the desired results flowing from the action . . . every effort is made to state these objectives in terms that permit quantitative measurement
3. series of indicators or measures of effectiveness are identified to help evaluate the extent to which objectives are met (the output indicator)

When the final indicator is related to cost input, the productivity measure is obtained. These steps toward implementation of a productivity measure are indeed applicable to higher education.

²³Paul L. Dressel, Handbook of Academic Evaluation (San Francisco: Jossey-Bass, Inc., Publishers, 1976), p. 85.

²⁴Robert W. Wilson and Samuel A. Finz, "Implementation of Productivity Analysis in the County," Public Management 50 (June 1974): p. 13.

The use of productivity measurement in higher education has in fact been heralded in the literature. "I think we have to consider very deeply the meaning of the words input, output, and the ratio between input and output which is variously labeled, 'cost-effectiveness,' 'value-added,' or 'productivity.'"²⁵ Vaizey also advocated a longitudinal approach, i.e., a continuous monitoring process for evaluating the results of education. His recommendation was echoed by Brown: "To evaluate higher education's successes, measured output must be contrasted to the cost of providing the environment."²⁶

In a monograph where the relevance of productivity to higher education is examined, Toombs related both the advantages and limitations of the productivity approach, and the potential application to higher education. The advantages are twofold. First:

Productivity ratios are easily communicated to individuals with a variety of backgrounds who hold limited knowledge of the activity system being described. . . The intricacies of the academic profession, of research and public service, and of supporting activities cannot be explained fully but the effects are partially conveyed by simplified indicators of input and output for institutions. The second advantage or set of advantages resides in the range of applications that can be made at various levels of a productivity activity, i.e., department, program, college, or statewide system. Ratios of input and output can be applied to almost any unit and then built up into meaningful networks (Gold 1971).²⁷

²⁵Lawrence et al., ed., Outputs of Higher Education, John Vaizey, "The Outputs of Higher Education: Their Proxies, Measurement, and Evaluation," p. 20.

²⁶Ibid., David G. Brown, "A Scheme for Measuring the Output of Higher Education," p. 37.

²⁷Toombs, Productivity, p. 12.

The productivity concept is also characterized by certain limitations. Overall, Toombs stated, "as an idea productivity has intrinsic limitations and they are multiplied by the problems of measurement and interpretation whenever one moves to application."²⁸ More specifically, four limitations are apparent. First, productivity is not a theory but rather an approach to theory or a descriptive tool. Second, productivity is not monistic; it lacks a single standard and therefore cannot be used to measure efficiency of a total system. Third, productivity measures are point-by-point measures, thus treating the dynamics of change poorly, and meaning that all information is treated ex post facto. Analysis is a captive of past events. Finally, the use of an arithmetic ratio imposes a requirement often overlooked. That is, the nature of input and output must remain stable during the period of study. In education, improved quality in either component is seldom fully accounted for.

Toombs also details specific objections to the pursuit of a productivity model in education:

(1) overemphasis on direct instruction to the exclusion of other functions of the university; (2) adoption of faculty time as a proxy for all the elements of instructional inputs; (3) acceptance of such fragmentary measures as credit-hours to indicate outputs that are much more complex; (4) inattention to the process of learning; (5) public usage of measures that reflect almost none of the improvement of quality that has occurred in educational practice; and (6) disregard for professional independence.²⁹

²⁸Ibid., pp. 12-13.

²⁹Ibid., p. 19.

Nevertheless, application of the model is justified if the potential benefits resolve the objections and outweigh the limitations. "Taken together these conditions do not deny the possibility that productivity analysis and adjustment can fit higher education."³⁰ They do indicate that some essential thinking and adjustment be done. Some of this thinking and some potential benefits of the productivity model were described by Dressel

(1) . . . to furnish unambiguous, highly specified, quantitative description of the major elements in an institutional system or subsystem and of the interrelationships which prevail among these major elements.

(2) . . . to provide more reliable means of predicting outcomes of actions which change one or more variables in the system.

(3) . . . to make possible the optimum use of resources according to a set of carefully specified output objectives for a sector of the institution or the entire institution.³¹

Dressel continues his discussion of model building by specifying five steps which must be undertaken. While the procedures derived in this study to compute productivity measures may not fulfill every step, they do satisfy enough requirements that the potential of incorporating productivity into building of a descriptive model is demonstrated.

The basic steps are five. First, all major input and output variables of interest must be identified and defined. Second, the organizational structure and processes by which outputs are produced from inputs must be described. Third, significant environmental variables, additional to the input and output variables, must be

³⁰Ibid.

³¹Dressel and Associates, Institutional Research in the University, pp. 236-37.

identified. Fourth, functional relationships (in the form of equations) among all identified variables must be established. Fifth, the model should be tested, preferably with historical data, to see if changes in the values of independent variables produce expected or at reasonable changes in the values of dependent variables.³²

The ultimate advantage of model building, therefore, goes beyond understanding the essentials of complex systems, and allows an administrator to try out alternative programs vicariously before actually committing expensive resources to courses of action. In concluding the discussion of productivity applied to higher education, four principles emerge which ascertain its utility as a tool to provide increased accountability.

First, while productivity measures may be subject to inconclusive or inaccurate interpretation on a large scale, i.e., when constructed to reflect 'total-factor,' they are still useful as indicators for definite segments of the higher education setting.

The input-output approach has great value as an analytical tool where objectives are reasonably clear, the processes understood, and the activities subject to control. At the departmental or program level, it can be applied to considerable advantage.³³

Secondly, the productivity model can be employed as a guide to adjust monetary and nonmonetary inputs. It helps distinguish adjustments for their consequences and encourages precise delineation of costs and results. For the administrator who needs to request, justify, manage, and report

³²Ibid., pp. 237-38.

³³Toombs, Productivity, p. 43.

funds, and who has to account for results of his department, the model offers definite potential.

Thirdly, the model can be utilized to account for the variable of quality. It may be, at present, that quality is an unrecorded output of higher education, which, when included in the derivation of a productivity measure, may directly increase production. By measuring the quality output in relation to cost input, one can also examine the assumption that increased costs yield increased quality, an assumption that is no longer automatically asserted by availability of unlimited financial input.

Finally, though indices of cost and quality may not be statistically perfect, proxies can be derived which are at least consistent and useful. "If the proxies operationally assist resource allocation, if decision-making is better with the proxies than without, this alone is justification for their adoption."³⁴ Enthoven agrees with this assessment:

. . . one should not expect to find an all-embracing criterion of value added or effectiveness, and such criteria aren't necessary for improved allocation decisions. Simple, crude indices can be very useful. This and similar experiences inspired the motto, 'It is better to be roughly right than precisely wrong.'³⁵

Purpose of the Study

It is the purpose of this study to construct the components of a single-factor productivity model which will

³⁴Lawrence et al., ed., Outputs of Higher Education, Brown, "Scheme," p. 29.

³⁵Ibid., Alain C. Enthoven, "Measures of the Outputs of Higher Education: Some Practical Suggestions for their Development and Use," pp. 52-53.

demonstrate the ratio (i.e., productivity measure) between the qualitative output and the cost inputs needed to achieve or perform a function of student personnel services. The specific function of student personnel services selected for illustration is financial aids, and will be analyzed both in terms of overall and individual objectives, and in terms of attendant costs and activities necessary to achieve them. The components will be applied for one time period, hence only the productivity measures are obtained and a demonstration of the model in a time series is not attempted.

Design of the Study

This study is descriptive and exploratory in nature. Historical and contemporary data for the student personnel division of Lansing Community College is used in the formulation of a productivity model.³⁶ Three discrete processes have been undertaken which were necessary components of the final model: delineation of objectives for the financial aids department (utilizing the management-by-objectives technique), cost analysis of the financial aids budget, and construction and administering of an instrument to measure the quality output of the financial aids department. A comprehensive review of the procedures and methodology is in Chapter III.

Definition of Terms

The following terms are defined as they are used for the purposes of this study.

³⁶Request and permission to use Lansing Community College data are included in Appendix A.

Accountability - "an obligation of the college to answer to its constituency for carrying out delegated responsibilities; the obligation of members of the college to produce and account for results, in terms of objectives or assignments which have been delegated."³⁷

Evaluation - the process of identifying, collecting, and examining performance data, i.e., measures of activity and of impact, in order to assist in the determination of worth or merit of a specified activity.

Financial Aids - a function of student personnel services which administers and awards loans, scholarships, and grants so that students lacking adequate financial resources may be assisted in the pursuit of higher education.

Goals - broad, long-range, generalized intended ends or outputs of a specific system, here refers to goals of a student personnel function, i.e., financial aids.

Input - the tangible and intangible resources entered into a system for conversion to desired output. Here, all resources translated into monetary terms (costs) in order to achieve specified objectives.

Management-by-Objectives (MBO) - the process "whereby the superior and the subordinate managers of an organization jointly define its common goals, define each other's major areas of responsibility in terms of the results expected of

³⁷ John E. Roueche, George A. Baker III, and Richard L. Brownell, Accountability and the Community College Directions for the 70's (Washington, D.C.: American Association of Community and Junior Colleges, 1972), p. 23.

him and use these measures as guides for operating the unit and assessing the contribution of each of its members."³⁸

Here, refers to the method used to establish departmental objectives at Lansing Community College.

Objectives - short-range, specified ends of the components of a system, here the financial aids function of student personnel services.

Outcome - used interchangeably with Output.

Output - measurable product or result of activities designed to achieve specified objectives, and attributable to designated inputs. Here, output primarily refers to quality and incorporates the notion of quantity where specific levels of achievement have been designated within financial aids' objectives criteria.

Productivity - a descriptive technique in which a measurable output of a system is related to a measurable unit of input. Two classes of productivity exist. The first, single-factor productivity, relates output to one type of input. Its productivity measure reflects the joint effect of a variety of factors. The second class, termed multifactor or total-factor, relates output to a combination of inputs.

Productivity Measure - the arithmetic ratio relating outputs (goods and services) to one or more of the inputs (labor, capital, energy, etc.) which were associated with that output; here, quality output compared to cost input.

³⁸George S. Odiorne, Management by Objectives (New York: Pitman Publishing Company, 1965), p. 55.

Quality - the degree to which a specified objective has been achieved, as determined both by measures of activity (primarily quantitative indicators), and by measures of impact (primarily qualitative indicators). Here, refers to the efficiency and effectiveness of the financial aids office during one year of operation and should not be construed to reflect the longitudinal effect(s) of financial aids services on students.

Student Personnel Services - a series of functions undertaken by the college or university designed both to support the instructional program, to respond to student needs collectively and individually, and to foster institutional development.

Limitations of the Study

1. The objectives delineated in this study for the function of financial aids have been derived through application of the management-by-objectives technique. No attempt has been made to evaluate the merits of the actual objectives. That is, while the actual objectives may be realized at a high level of achievement, they may or may not have merit or worth for students or for the institution.

2. The data utilized in deriving productivity measures are based upon the administration of financial aids at Lansing Community College for a period of one academic year (1974-1975). Cost data, in particular, are based upon the operational budget of just that department for that year.

3. The productivity procedures in this study are char-

acterized by two conditions. First, they are applied at only one point in time, i.e., to one year of operation. The development of productivity measures over a time series, therefore, remains an uncompleted aspect, not within the scope of the present study. Second, the model is designed to be single-factor, which utilizes quality output and cost input; the productivity measure reflects joint effects of a variety of inputs which have been expressed solely in cost terms.

4. The evaluation instrument used to ascertain the quality output component is subject to limitation. It has not been subjected to tests of reliability and validity. The instrument was constructed for purposes of a descriptive exploratory study and should not be employed for empirical purpose without further refinement and testing.

Organization of the Study

The first chapter of the study contains discussion of the general setting in higher education and the concepts related to the problem being considered. It also contains a statement of purpose, overview of procedures and methodology, definition of terms, and limitations of the study. Chapter II consists of a review of selected literature relevant to the study. Procedures developed and derivation of the productivity measures are presented in Chapter III. The summary, conclusion and findings, implications, and recommendations for further research comprise Chapter IV.

CHAPTER II

REVIEW OF SELECTED LITERATURE

In this chapter selected literature related to the construction of a productivity model for student personnel services is reviewed. Two broad concepts, accountability and productivity, are the respective subjects of the first two sections. Following are four sections concerned with components and techniques relevant to the proposed model. Topics of these sections are, first, evaluation of student personnel services; second, goal-setting, delineation of objectives (with emphasis given to management-by-objectives), and outcome measurement; third, costing techniques; and fourth, the financial aids function of student personnel services. The final section of this chapter is a discussion of the literature reviewed.

Accountability:

Concept and Application to Higher Education

The literature of higher education is replete with references to accountability. A comprehensive review of accountability is beyond the scope of this paper and indeed would be superfluous to the primary purpose of the study. It is appropriate, however, to examine the concept from three perspectives: reasons for the contemporary focus on accountability, definition of accountability, and the impact of

accountability on higher education. The first and second of these perspectives are examined simultaneously in the following.

The concept of accountability has been a part of the American educational scene for many years.

The educational libraries in the United States, in the universities, and in our state and national agencies of Government, have in them numerous reports of close and critical examinations of our educational systems and their performance.¹

Historically, however, it has been obscured by the doctrine of what Wilson has called educational determinism, with its consequent acceptance of student failure.

Simply stated, educational determinism is the belief that people have a predetermined capacity for learning, a capacity best defined by intelligence quotient. This being the case, it is reasonable and acceptable that an increasing number of students will fail as they climb the educational ladder. Or, to put it in the language of Darwinism, in the educational jungle only the fittest survive. Until recently this belief in a limited and predetermined capacity to² learn precluded the idea of accountability for learning.

Currently, this belief in educational determinism is being rejected by growing numbers of educators. Given the re-examination of basic beliefs about learning and the evidence of many studies, a re-awakened interest in accountability has taken place. Furthermore, a number of social, economic,

¹George M. Delgrosso, ed., Accountability in the Community College, Proceedings of the Second Annual International Summer Institute (Ontario: Lambton College, 19-20 August 1971), S.V. Martorana, "Accountability at the State and Provincial Level," p. 42.

²John E. Roueche, George A. Baker III, and Richard L. Brownell, Accountability and the Community College Directions for the 70's, with a Foreword by Richard E. Wilson (Washington, D.C.: American Association of Community and Junior Colleges, 1972), pp. 1-2.

and political factors contribute to the reemergence of accountability as a fundamental concept to be reckoned with in American education.

Browder cited two major reasons why accountability is currently being linked with education. First, the pressures for change--from political, social and economic sectors--are demanding responsiveness to perceived problems. Second, the advances (primarily technical) within and outside education have developed to a point where accountability patterns seem feasible, at least worthy of trying in the absence of other visible measures of success, or suitable explanations for what is happening.³

With a focus upon higher education, Hartnett presented two dominant reasons for the current demand for accountability. One he identified as the growth of multi-institutional coordinating agencies. In the early 60's many states realized that voluntary planning and coordinating efforts would not be sufficient to meet the challenges of the coming decade.

At that time several states either enacted legislation creating mandatory coordinating and planning agencies or strengthened the power of existing ones. The trend was thus set in motion, and the implications for statewide evaluation and systematic accounting procedures were clear.⁴

The second reason Hartnett identified is the increasing financial problems confronting higher education, "a fiscal

³Lesley H. Browder, Jr., An Administrator's Handbook on Educational Accountability (Arlington, Va.: American Association of School Administrators, 1973), pp. 12-13.

⁴Rodney T. Hartnett, "Accountability in Higher Education" (Princeton: College Entrance Examination Board, 1971), p. 1.

shortage of growing urgency in the past five years that has recently reached crisis proportions."⁵ Hartnett conceded that the causes of the financial crisis are many and complex, but attributed the major cause to a credibility gap, defined as "a growing feeling of mistrust on the part of higher education's relevant publics (be they alumni, parents of school-age children, or whatever) about what higher education is doing or 'producing.'"⁶ For these major reasons, he felt, higher education is being called to account.

In the introduction to Outputs of Higher Education: Their Identification, Measurement, and Evaluation, a study prior to Hartnett's, his latter reason was cited in similar terms.

Self examination has been forced upon our institutions of higher education by alienated students, disaffected faculty, dissatisfied legislators, disenchanted alumni, and disappointed parents who are challenging the university. . . Both internally and externally, the university is being called to accountability.

To the problem of accountability, add the difficult problem of financing higher education.

Roueché et al., also mentioned what Hartnett labeled the "credibility gap."

The multimillion dollar system is now imperiled by its own dramatic failure to produce effective and pertinent learning; the nation's welfare is threatened by the fact that education seems incapable of meeting the needs of increasingly large numbers of citizens. . . Disenchanted

⁵Ibid., p. 2.

⁶Ibid.

⁷Ben Lawrence, George Weathersby, and Virginia W. Patterson, eds., Outputs of Higher Education: Their Identification, Measurement, and Evaluation (Boulder, Col.: WICHE, July 1970), p. 1.

taxpayers, considering the vast resources already lavished upon education, are beginning to wonder what they are getting for their tax money.⁸

In other publications describing the call for accountability, similar reasons were delineated. Young⁹ listed: Americans' dissatisfaction with school costs, concern for low pupil achievement, and a recognition that education is big business. Casse et al.,¹⁰ cited budgetary restrictions, inflation, and frequent demands for empirical studies of operation.

Martorana¹¹ enumerated current pressures and developments which gave rise to the concern for accountability. Included are: first, a shifting sense of purpose for education, especially higher education; second, student activism; third, the recent movement of faculty toward collective bargaining; fourth, the emergence and refinement of measuring technique and devices; and finally, scarcity of funds.

While there seems to be general and repeated agreement about the need for accountability, there is no consensus

⁸Roueché et al., Accountability and the Community College, p. 3.

⁹Stephen Young, "Accountability and Evaluation in the 70's: An Overview," paper presented at the 57th annual meeting of the Speech Communication Association, San Francisco, 27 December 1971.

¹⁰Robert M. Casse, Jr., Arthur L. Gillis, and John Mullen, "A Student Services Data Information System: An Approach to Process Accountability" (NASPA Management Information Newsletter, February 1974), p. 3.

¹¹Delgrosso, Accountability in the Community College, ed., Martorana, "Accountability at the State and Provincial Level," pp. 43-45.

about the definition and implications of the concept. Before education borrowed and adopted the term, Browder contends that accountability expressed a role relationship. Its definition, therefore, is: "the requirement on the occupant of a role, by those who authorize that role, to answer for the results of work expected from him in the role."¹² In current educational literature, he found accountability used in three different senses. First, it is synonymous with responsibility. Secondly, accountability suggests an obligation to explain or account for the disposition of tasks entrusted to an individual. Thirdly, educational accountability has evolved to mean that schools and school administrators are both responsible and answerable for what they produce as outcomes.

Leon Lessinger, who served as associate commissioner for elementary and secondary education at the U.S. Office of Education until 1970, and who is generally recognized as the father of educational accountability, gave impetus and form to the third interpretation described by Browder. He permanently grafted the notion of accountability to educational policy "by requiring that projects funded under Titles VII and VIII of the Elementary and Secondary Education Act produce predictable and measurable results that could be certified by independent audit."¹³

¹²A.D. Newman and R.W. Rowbottom, Organization Analysis (Carbondale: Southern Illinois University Press, 1968), p. 26, quoted in Browder, An Administrator's Handbook on Educational Accountability, p. 6.

¹³Roueché et al., Accountability and the Community College, p. 5.

Since that time, higher education has explored the interpretations and implications of accountability in its own sphere. One example of this work was done by Hartnett.¹⁴ He considered the relationship between accountability and evaluation, and while stating that both are aimed at learning about the effect of an educational institution, was careful to cite distinctions between the two.¹⁵ He also described two forms of accountability that seem likely to gain support in higher education. The first is a move toward improved, output-oriented management methods, always with an eye toward efficiency. The second form is adoption of an external assessment of efficiency and effectiveness, where performance would be judged by direct comparison with others with the same financial base. Hartnett maintained, however, that higher education is not yet proficient in the assessment of effectiveness. The most realistic question, therefore, is whether it is sensible to hold institutions accountable for their effectiveness just yet, and whether the efficiency of operations couldn't be vastly improved while the effectiveness is being considered.

In another major study concerning accountability in higher education, Mortimer considered three aspects of the concept.

The term accountability has at least three major applications to higher education. First, in the management of

¹⁴Hartnett, "Accountability in Higher Education."

¹⁵Ibid., pp. 5-7. For a discussion of the distinctions, see pp. 2-3 above.

higher education there is the view that accountability be defined in legal terms. In practice administrators are accountable to a variety of nonlegal but equally demanding interests and constituents. Second, evaluation is part of accountability but the latter term is more encompassing. Third, while responsibility and accountability are often used interchangeably, Neff urges a distinction between voluntarily assuming an obligation and the legal liability attached to the performance of certain acts.¹⁶

Mortimer then examined the more common pressures for accountability, both from external and internal sources. The external forces included: executive agencies of federal and state governments, legislatures, the courts, statewide coordinating agencies, and the public. Within the institution, three major difficulties in assessing accountability were described:

(1) the weaknesses of academic authority result in increased pressures to codify the faculty-administrative relationship; (2) lack of clearly defined goals and objectives are frequently matched with proposals to hold institutions more accountable through certain management techniques and by increased emphasis on student learning; (3) organizational complexity of colleges and universities often results in proposals for decentralized decision-making structures that are not sufficiently aware of legitimate demands for accountability.¹⁷

Martorana,¹⁸ in offering his definition of accountability, called attention to three facets to be included. One is the person or groups who are to be accountable. A second is the person or agency to whom the account is made. A third

¹⁶Kenneth P. Mortimer, Accountability in Higher Education (Washington, D.C.: American Association for Higher Education, February 1972), p. 9.

¹⁷Ibid., pp. 1-2.

¹⁸Delgrosso, Accountability in the Community College, Martorano, "Accountability at the State and Provincial Level," p. 46.

is the goals or purposes against which the measurement of accountability is to be performed. His point in stressing the diverse aspects of accountability is "the impossibility of the use of any one method of accounting. Any one method just will not prove fully effective and useful in meeting today's demands on us for a multi-varied accountability."¹⁹

In view of the various interpretations of accountability for higher education it is hardly surprising that a number of responses have been suggested. Effort seems to be divided into at least two categories: the use of activity and output measures, and the application of management techniques. A full investigation of these categories, while beyond the scope of this study, would reveal some overlap in their implementation.

An outstanding example of this overlap is evident in the work undertaken by Harpel²⁰ at the University of Colorado. He devised a set of procedures for implementing an accountability system specifically for the student personnel level of the institution. His chronology of procedures incorporates both use of activity and output measures, and application of management techniques. Harpel also places strong emphasis on evaluation as a necessary aspect of good management.

The use of activity and output measures is the focus of

¹⁹Ibid., p. 47.

²⁰Richard L. Harpel, "Planning, Budgeting, and Evaluation in Student Affairs Programs: A Manual for Administrators" (unpublished manuscript, University of Colorado, 1976).

work undertaken by the Western Interstate Commission on Higher Education (WICHE) Management Information Program (MIS),²¹ which seeks to measure educational outputs and the extent to which educational institutions have influenced those outputs. It further attempts to assign dollar values to the outputs produced. Another approach is the work undertaken by the Educational Testing Service (ETS) which has constructed a goals inventory for institutions of higher education.²²

The second category of response refers to utilization of various management techniques. Hartley²³ and Weslowski²⁴ discuss the application of Planning, Programming, Budgeting Systems (PPBS) to demands for accountability. PPBS is employed as a method to improve decisions by the allocation of resources to obtain maximum benefit.

Hartnett names a management information system ("The MIS is a system of information collection, storage, collating, and distribution that makes it possible to monitor routinely certain aspects of an institution's operations."²⁵) as a

²¹Lawrence et al., Outputs of Higher Education, p. 4.

²²Institutional Research Programs for Higher Education, Institutional Goals Inventory (Princeton: ETS, 1971).

²³Harry J. Hartley, "PPBS: A Systems Approach to Educational Accountability" (Columbus: Ohio State Department of Education, 13 April 1972).

²⁴Zdzislaw P. Weslowski, "An Accountability Technique in Higher Education: The Role of Planning, Programming, Budgeting and Evaluation Systems (PPBS)" (Winter Haven, Fla.: Polk Community College, 1974).

²⁵Hartnett, "Accountability in Higher Education," p. 8.

control feature of accountability systems in higher education. This viewpoint is supported by Zaharchuk: "I am relating accountability to good management, and I am suggesting that good management of a system is predicated upon adequate information systems."²⁶

A final response to accountability has been undertaken in the application of the technique called management-by-objectives (MBO). The works of Roueche et al.,²⁷ Braaksma,²⁸ Collins,²⁹ Deegan et al.,³⁰ Kennedy,³¹ and Lahti,³² discussed later in this chapter, describe the utilization of MBO as a contribution toward greater accountability in higher education.

²⁶Delgrosso, Accountability in the Community College, T. Zaharchuk, "Management Techniques and Accountability in Education," p. 58.

²⁷Roueche et al., Accountability and the Community College.

²⁸Augie Braaksma, "RHPO and MBO: Partners in Accountability" (independent study, Michigan State University, August 1972).

²⁹Robert W. Collins, Management by Objectives: Advantages, Problems, Implications for Community Colleges (Bethesda, Md.: ERIC Document Reproduction Service, ED 057 792, 1971).

³⁰William L. Deegan et al., Community College Management by Objectives: Process, Progress, Problems (Sacramento: California School Board Association, 24 January 1974).

³¹John D. Kennedy, "Planning for Accountability Via Management by Objectives," Journal of Secondary Education 45 (December 1970): 348-54.

³²Robert E. Lahti, Innovative College Management (San Francisco: Jossey-Bass, Inc., Publishers, 1973); "Management by Objectives," College and University Business 51 (July 1971): 31-33; and "Implementing the System Means Learning to Manage Your Objectives," College and University Business 52 (February 1972): 43.

Throughout all the interpretations and responses to the call for accountability runs a common theme. Higher education and its representatives have an obligation to their constituencies for carrying out delegated responsibilities, i.e., to produce and account for results in terms of the objectives which have been delegated. It seems appropriate to cite Lessinger for a summation of how the accountability concept can apply to higher education.

The comparison between what we are supposed to do or want to do, and what in fact we accomplish is accountability. It's a convenient name for a whole set of faults. I don't see it as being de-human, I don't see it as performance contracting or anything else, other than that it is a concern for productivity--accounting for one's performance, hopefully in terms of what objectives we should account for.³³

. . . the accountability movement is a reflection of a demand for increased productivity.³⁴

Productivity:

Concept and Application to Higher Education

It is difficult to review the literature of productivity since the concept is not an outgrowth of any distinct discipline.

What began in economics and mechanics was applied by a variety of specialists to the problems at hand by the expedient of twisting the concept to fit. As a consequence, there is no coherent body³⁵ of literature that can be readily isolated and examined.

³³Delgrosso, Accountability in the Community College, Leon Lessinger, "A C C O U N T A B I L I T Y," p. 16.

³⁴Ibid., p. 12.

³⁵William Toombs, Productivity: Burden of Success, ERIC/Higher Education Research Report No. 2 (Washington, D.C.: American Association for Higher Education, 1973), p. 5.

It would seem more feasible, therefore, to review selected literature which describes the concept as it is currently understood and applied, with particular attention paid to the components of productivity and to its application to higher education.

The concept of productivity was given national prominence when President Nixon, on June 17, 1970, announced his intention to establish a National Commission on Productivity. Some of the initial work of that Commission is available for review. Two articles comprise a monograph entitled The Meaning and Measurement of Productivity.³⁶ The first, by Herbert Stein,³⁷ includes common definitions of productivity, and discusses general usefulness of the concept. His focus was upon labor as our most important productive resource, and its relationship to output. Stein discussed rates of productivity growth within the national economy, and related productivity to the standard of life enjoyed in this and other countries.

In the second article, Jerome Mark provided a more specific discussion in "Concepts and Measures of Productivity."³⁸ His topics were single and total factor productivity, and the importance of the output and input components. Fin-

³⁶U.S., Department of Labor, Bureau of Labor Statistics, The Meaning and Measurement of Productivity, by Jerome Mark and Herbert Stein, Bulletin 714 (Washington, D.C.: Government Printing Office, 1971).

³⁷Ibid., Stein, "The Meaning of Productivity," pp. 1-6.

³⁸Ibid., Mark, "Concepts and Measures of Productivity," pp. 7-15.

ally, Mark reviewed the available measures (national and industrial) of productivity. His recommendation was that additional information be developed in two areas: "the data base from which output, input, and price statistics are compiled, and the conceptual base upon which the output and price data are developed."³⁹

The application of the productivity concept to the service sector of the economy was discussed in a monograph published by an Advisory Group to the National Commission on Productivity. In Opportunities for Improving Productivity in Police Services,⁴⁰ productivity is defined as "the return received for a given unit of input."⁴¹ The document reported on the "effort to develop tools--concepts, measures, means for improvement, and strategies for change--whereby police departments can themselves improve productivity."⁴² The procedures and models described are a valuable contribution to an understanding of the productivity concept.

A recent issue of Public Management also investigated the meaning of productivity in the public sector. In it, Fisk⁴³ discussed the meaning of productivity and concentrated

³⁹Ibid., p. 14.

⁴⁰U.S., Department of Justice, Law Enforcement Assistance Administration, Report of the Advisory Group on Productivity in Law Enforcement on Opportunities for Improving Productivity in Police Services (Washington, D.C.: National Commission on Productivity, 1973).

⁴¹Ibid., p. 1.

⁴²Ibid., p. v.

⁴³Donald M. Fisk, "Issues in Local Government Productivity Management," Public Management 56 (June 1974): 6-8.

on the identification and measurement of inputs and outputs. Kuper⁴⁴ presented several reasons for the recent concern for productivity along with elements necessary for productivity growth. Wilson and Finz⁴⁵ delineated steps toward implementation of productivity management, and Burkhalter and Coffman⁴⁶ related productivity to the technique of management-by-objectives.

Extensive application of the productivity concept to higher education has not yet been undertaken. The most comprehensive work is a monograph by Toombs entitled Productivity: Burden of Success. His study "considers productivity adjustment--modifications to inputs, outputs, and production processes--as it currently appears in higher education."⁴⁷ After examining these concepts, Toombs concluded that

In its simplest form of input-output relationships, productivity offers no absolute remedy to the financial problems of higher education. It may be at the institutional level too much was expected and the essential ideas stretched too far in the search for global indicators and convenient quantifications. Nevertheless, the productivity concept offers techniques that can be applied to higher education's needs.⁴⁸

⁴⁴George H. Kuper, "Productivity Improvement: The Route to More Effective Public Management," Public Management 56 (June 1974): 6-8.

⁴⁵Robert W. Wilson and Samuel A. Finz, "Implementation of Productivity Analysis in the County," Public Management 56 (June 1974): 12-14.

⁴⁶David A. Burkhalter and Jerry B. Coffman, "Charlotte/Management by Objectives," Public Management 56 (June 1974): 15-16.

⁴⁷Toombs, Productivity, p. 3.

⁴⁸*Ibid.*, p. 43.

At the present time, however, Toombs indicated that much productivity activity is at the level of speculation and discussion or is confined to a small number of institutions.⁴⁹

Widespread improvements in productivity will not take place until institutional experimentation with productivity techniques⁵⁰ increases and successful methodologies are applied.

In a work primarily concerned with evaluation, Dressel devoted considerable attention to the concept of productivity. First, he listed and discussed five specific issues to be resolved: (1) level at which productivity is to be examined; (2) type of productivity to be assessed; (3) measures to be used; (4) manipulation of the data, computation of indices, and formulation of judgment about them; and (5) whether quantity, quality, or both are to be assessed.⁵¹ Secondly, Dressel noted three concerns of a more general nature.

. . . the assessment of university productivity is a complex task, and as long as the pressure for it is external and based on a single structure presumed appropriate for all, it cannot be equitable.⁵²

The productivity model also applies more readily to instruction than to other purposes and functions of higher education. Hence its use can overemphasize direct instruction and the teaching faculty . . .⁵³

Input-output analyses also require some basis of comparison. Achievement of stated goals has little meaning until the goals are associated with historical data from the same institution or norms based on other institutions.⁵⁴

⁴⁹Ibid., p. 44.

⁵⁰Ibid.

⁵¹Paul L. Dressel, Handbook of Academic Evaluation (San Francisco: Jossey-Bass, Inc., Publishers, 1976), pp. 85-86.

⁵²Ibid., p. 87

⁵³Ibid., p. 88.

⁵⁴Ibid., p. 91.

Despite the complexity of issues to be resolved and the conceptual concerns that affect (perhaps adversely) the application of productivity, Dressel concluded that higher education may in fact have little choice in whether to adopt productivity in responding to demands for accountability.

In less extensive works, the following authors have examined aspects of productivity as they apply to higher education. Schultz⁵⁵ related higher education to national productivity by examining the contribution of education to economic growth. Specifically, he looked at the desirability of public versus private financing of education from the standpoint of efficiency and equity. He saw educational expenditures as investments in human capital, and analyzed the rates of return realized from investing in various levels of education.

Carlson⁵⁶ drew an analogy between the production and cost functions of higher education institutions and business firms in the United States. His unit of analysis was the total institution, and a cross sectional rather than longitudinal approach was taken. The study emphasized economic behavior, though it was not a cost benefit analysis nor an evaluation of higher education.

⁵⁵Theodore W. Schultz, "Education and Productivity," paper prepared for the National Commission on Productivity (Bethesda, Md.: ERIC Document Reproduction Service, ED 071 152, June 1971).

⁵⁶Daryl E. Carlson, "The Production and Cost Behavior of Higher Education Institutions," paper prepared for Ford Foundation Program for Research in University Administration (Berkeley: California University, December 1972).

Garner⁵⁷ argued for the development of micro experiments rather than reliance upon large scale survey data in his application of input-output analysis to the process of schooling. He reported that most data reflect quantities, which is the serious shortcoming of most production studies. It is the service of production units, he maintained, and not the units themselves, that are factors of production.

Wortman⁵⁸ maintained that higher education has failed to utilize available technical advances for the improvement of productivity. He examined various ratios in attempting to find the most productive use of resources (inputs). An example:

Cost per successful student credit hour is given by C/HxA where C is cost, H is credit hour, and A represents successful students. How might we use this measure to help maximize the output of successful students with given resources or a given cost?⁵⁹

Wortman concluded that his measures

bear some resemblance to marginal analysis and short-run production functions in economic theory. Perhaps they could be used together to determine optimum enrollment. Application to higher education awaits further experimentation and research.⁶⁰

Lahti⁶¹ reviewed the public call for accountability and contended that increased productivity was a viable means

⁵⁷William T. Garner, "Inputs and Outputs in the Educational Process," speech given at the 56th Annual Meeting of the American Educational Research Association, New York, 4 February 1971.

⁵⁸Wilferd Wortman, "Productivity and Professors," College and University Business 55 (December 1973): 23-24.

⁵⁹Ibid., p. 23.

⁶⁰Ibid.

⁶¹Robert E. Lahti, "15 Ways to Increase Staff Productivity," College and University Business 54 (June 1973): 37.

of adding to the financial resources available to higher education. He suggested fifteen methods by which staff productivity might be improved.

At least two studies have investigated productivity in the community college. Berchin⁶² related cost to student learning in an attempt to identify the most productive courses offered at fifteen community colleges. He found that a change in the pattern of classroom organization or instructional mode could reduce per-pupil costs and increase learning as measured by grades and completion rates.

Matthews⁶³ identified and classified input variables for the community college. They consisted of institutional variables (primarily financial) and variables related to the community (primarily socio-economic). Output variables related to generally accepted purposes of the community college. He then collected and analyzed data from several institutions in an effort to establish relationships between input and output variables.

The interaction of the nearly infinite number of input variables in the community and institutional setting produces a variety of output variables. One of the purposes of input-output research is to identify specific significant input variables and certain output variables that relate to the stated goals of the organization and then determine the relationships between these variables.⁶⁴

⁶²Arthur Berchin, Toward Increased Efficiency in Community Junior College Courses: An Exploratory Study (Bethesda, Md.: ERIC Document Reproduction Service, ED 063 915, 1972).

⁶³James Edwards Matthews, An Input-Output Study of Selected Community Junior Colleges (Bethesda, Md.: ERIC Document Reproduction Service, ED 055 581, 1971).

⁶⁴Ibid., p. 5.

One of his most significant conclusions concerned the function of student personnel services.

Expenditures in the area of student personnel services appear to be particularly crucial . . . the junior colleges that provided greater financial emphasis upon student personnel services have a more comprehensive enrollment of students and a better completion record by college parallel students. In light of these relationships, it would behoove junior college administrators to analyze the operation of student personnel services to insure that optimum benefits ⁶⁵are being derived by the students and the institution.

Evaluation of Student Personnel Services

Because productivity entails an appraisal of output, evaluation is an essential component of a productivity model. Whereas student personnel services is the focus for the projected productivity model in this study, selected literature concerning evaluation of student personnel services is reviewed in this section. There is no intention to trace the history and development of student personnel services, nor to identify essential and/or recommended practices for student personnel services. The direction followed is toward the need for evaluation, and the efforts that have been made toward this end. Indeed, the abundance of evaluation work may be regarded as partial confirmation of a recognized need. A review of this effort follows; the issue remains unresolved, however, of whether these efforts have adequately fulfilled the need.

Early evaluations of student personnel services have been comprehensively reviewed by several authors. Their works

⁶⁵Ibid., p. 27.

are readily available and are cited and summarized here rather than exhaustively reviewed regarding their specific content.

In 1949, Froehlich⁶⁶ reviewed the literature of evaluation of guidance services. Two notable facets of his review included establishment of seven categories for evaluation studies, and delineation of six principles necessary in an attempt to evaluate student personnel services.

Arbuckle⁶⁷ discussed evaluation efforts in his 1953 publication. The two basic reasons for continuous evaluation of student personnel services included: a professional ethical need to accrue valid evidence indicating the positive effect of effort expended, and for justification of continued financial support. He objected to the survey method as the standard and traditional method of evaluation, since a checklist of existing services is no evaluation at all, and called instead for application of more scientific methods.

A much more accurate means of evaluation is the scientific method that has been used by the physical sciences for a long time. As described by Travers, this consists of 'defining carefully the objectives that are to be achieved, specifying the group in whom they are to be achieved, developing instruments for measuring the extent to which these objectives are achieved, and finally carrying through the program and then measuring its actual outcomes.' Basic for any evaluation is the formulation of objectives, the development of processes by means of which these objectives may be achieved, the development of criteria which will indicate the accomplishment of these objectives, and the development of tools and in-

⁶⁶ Clifford R. Froehlich, Evaluating Guidance Procedures: A Review of the Literature (Washington, D.C.: U.S. Office of Education, 1949).

⁶⁷ Dugald S. Arbuckle, Student Personnel Services in Higher Education (New York: McGraw-Hill, 1953).

struments capable of measuring the extent to which the criteria are being met.⁶⁸

In the 1960 edition of Encyclopedia of Educational Research, Blaesser and Crookston⁶⁹ chronologically reviewed student personnel evaluation efforts. They began with the first national survey made by Hopkins in 1925 for the American Council on Education, and in their synopsis of evaluation efforts of the thirties and forties, supported Arbuckle's contention that surveys and questionnaires were the predominant methods employed to examine student personnel services.

Blaesser's⁷⁰ review of the early fifties identified only a few studies dealing with evaluation. During that same time period, however, several attempts were made to develop evaluative criteria.^{71,72,73,74} The instruments

⁶⁸Robert M.W. Travers, "A Critical Review of Techniques for Evaluating Guidance," Educational and Psychological Measurement 9 (Summer 1949): 213, cited in Arbuckle, Student Personnel Services in Higher Education, pp. 12-15.

⁶⁹Encyclopedia of Educational Research, 1960 ed., s.v. "Student Personnel Work-College and University," by Burns B. Crookston and Willard W. Blaesser (New York: MacMillan Company, 1960), pp. 1415-27.

⁷⁰Willard W. Blaesser, "The Organization and Administration of Student Personnel Programs in College," Review of Educational Research 24 (April 1954): 113-20.

⁷¹Eric N. Rackham, "The Need for Adequate Criteria When Evaluating College Student Personnel Programs," Educational and Psychological Measurement 1 (1951): 691-99.

⁷²American Association of Colleges for Teacher Education, "Standards for Student Personnel Services and Evaluative Criteria," in Third Yearbook (n.p., 1950), pp. 125-47.

⁷³Robert B. Kamm, "An Inventory of Student Reaction to Student Personnel Services," Educational and Psychological Measurement 10 (1950): 537-44.

⁷⁴C. Gilbert Wrenn and Robert B. Kamm, "A Procedure for

developed individually by Rackham, and jointly by Kamm and Wrenn were utilized at several institutions, but in 1955, when Kamm⁷⁵ queried forty selected student personnel administrators, he found that, for the most part, little was being done in systematic evaluation and research.

In more recent literature, the need for better evaluation of student personnel services is still evident. Klitzke⁷⁶ focused upon needed research in the community college and presented ten questions for immediate consideration along with suggestions for generating and improving research.

Robinson and Brown reported on current research pertaining to student personnel services in 1961. Of the 77 examples studied, the most frequent topics were student characteristics, and attendance and withdrawal surveys. The overall conclusion was that there "seems to be serious neglect of research relating to many areas of student personnel programs."⁷⁷

A 1963 review conducted by Lloyd-Jones and Smith⁷⁸

Evaluating a Student Personnel Program," School and Society 67 (1948): 266-69.

⁷⁵Robert B. Kamm, "How Effective Are Our Student Personnel Programs?" Personnel and Guidance Journal 33 (1955): 318-24.

⁷⁶Louis L. Klitzke, "Needed Research in Junior College Student Personnel Services," Junior College Journal 30 (April 1960): 452-59.

⁷⁷Donald W. Robinson and Dirck W. Brown, "A Report on Student and Student Personnel Research Activities," Personnel and Guidance Journal 40 (December 1961), p. 360.

⁷⁸Esther Lloyd-Jones and Margaret Ruth Smith, "Higher

asserted that little research had been done in the past three years regarding student personnel programs in higher education.

At a 1964 conference to plan research on junior college student personnel programs, Young presented a review of the literature together with implications for research. Again, the predominant method of research was cited and criticized: "Little research on student personnel services as of 1960 amounted to more than surveying the most common or 'best' practices."⁷⁹ "Most research . . . is of a normative type regarding various segmented aspects of the total program. The need seems to be for qualitative studies rather than for more quantitative ones . . ."⁸⁰

At the same conference, Fordyce enumerated the problems of evaluation. They included: goals ("effectiveness of guidance can be determined only in relation to outcomes that can be isolated and described"⁸¹), control of variables, difficulty of longitudinal studies, and determination of

Education Programs," Review of Educational Research 33 (April 1963): 163-70.

⁷⁹Max R. Raines, conference coordinator, Conference to Plan Research on Junior College Student Personnel Programs (Flint, Mi.: Flint Community Junior College, 1964), Raymond Young, "A Review of Related Literature and Its Implications for Research in Junior College Student Personnel Programs," p. 20.

⁸⁰Ibid., p. 23.

⁸¹Ibid., Joseph W. Fordyce, "Criteria for Evaluation of Student Personnel Programs in Public Junior Colleges," pp. 119-200. Fordyce elaborates on the problems of evaluation in "Evaluation of Student Personnel Services in Community Colleges," Student Development Programs in the Community College, Terry O'Banion and Alice Thurston, eds., (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1972): 92-101.

adequate criteria for measurement.

A two year study was completed in 1965 which attempted to evaluate the present status of junior college student personnel work against criteria established by professionals in the field. The study, initiated by the American Association of Junior Colleges and supported by the Carnegie Corporation, was coordinated by Raines.⁸² Difficulty in defining criteria led to a companion project supported by the U.S. Office of Education. In the resulting document, twenty-one basic functions of student personnel services were identified. Using the criterion that two-thirds of twenty-one functions were provided, three-fourths of the colleges studied were judged inadequate in their provision of student personnel services. A familiar criticism was stated concerning evaluation:

Efforts to appraise programs are seriously handicapped by the absence of well-established criteria. Surprising as it may be, there is little or no empirical evidence that a student personnel program has any real impact upon the student or institutional development.⁸³

And in the final chapter of the report, concerned with research needs, "critically evaluating the effectiveness of each personnel service in meeting especially pertinent goals,"⁸⁴

⁸²Junior College Student Personnel Programs: Appraisal and Development, A Report to the Carnegie Corporation, Max R. Raines, director (Washington, D.C.: American Association of Junior Colleges, November 1965). A shorter version of this report which incorporates the project's findings and recommendations is Charles C. Collins, Junior College Student Personnel Programs: What They Are and What They Should Be (Washington, D.C.: American Association of Junior Colleges, 1967).

⁸³Ibid., Max R. Raines, Part I, p. 27.

⁸⁴Ibid., Donald P. Hoyt, "Research Needs in Junior College Student Personnel Work," in Part V, p. 14.

was named as a specific research problem. Finally, Dobbin and Turnbull advocated assessment of student personnel services by staff within the college according to the classic pattern of scientific inquiry: (1) state the purposes of the program, (2) establish the criteria by which the success of the program will be judged, and (3) apply the criteria and interpret the evidence that accumulates.⁸⁵

The Raines study was a basis for an investigation conducted by Yoder and Beals in 1966.⁸⁶ Format and methodology were imitated; the outcome, however, was a summary of guidelines presented in the form of recommendations for twelve functions of student personnel services.

In another research effort utilizing part of the Raines study, Maryland community colleges used a modified version of the questionnaire instrument to survey the opinions of students, faculty, administrators, and student personnel workers regarding currently offered services and practices.⁸⁷

In response to a recommendation of the Raines study, a year long study was funded by the Esso Foundation in 1971.

For a number of reasons, replication . . . was not feasible. Instead, procedures were designed to collect

⁸⁵Ibid., John E. Dobbin and William W. Turnbull, "The Need for New Appraisal Techniques in Junior Colleges," in Part V, p. 15.

⁸⁶Marlen Yoder and Lester Beals, "Student Personnel Services in the West," Junior College Journal 37 (October 1966): 38-41.

⁸⁷Edward Kuhl, "Do We Make a Difference? - New Directions in Evaluation," paper presented at the American Personnel and Guidance Convention, Las Vegas, 3 April 1969 (Bethesda, Md.: ERIC Document Reproduction Service, ED 031 731, 1969).

data about what is going on in the student personnel areas in the nation's community and junior colleges and to discover any significant trends which may be developing.⁸⁸

Data were collected regarding characteristics of student personnel administrators, their previous training and experience, budget and organization of student personnel services, extent and range of services, and major problems encountered. The Esso study, therefore, was also of a survey nature and as such was not truly an evaluation of student personnel services.

In 1973, Lewis commented on current evaluation attempts.

Aside from checklists, satisfaction surveys, and technique comparisons, our effectiveness is estimated by tabulating users and soliciting opinions. In a period of reallocation of declining financial resources, our limited success in developing sound⁸⁹ evaluational methods or criteria will prove troublesome.

Also in 1973, Dressel⁹⁰ discussed two problems to be resolved in the evaluation of student personnel services. The first was: to define the benefits, and the criteria that are acceptable indices of those benefits. The second problem was prior and more pervasive, and that is the extent of bias and emotion involved in evaluation. Besides addressing these issues, Dressel would alter the focus of evaluation. ". . . one tends to concentrate on the characteristics of the enviro-

⁸⁸Jane E. Matson, "A Perspective on Student Personnel Services," Junior College Journal 42 (March 1972): 48.

⁸⁹Charles L. Lewis, "College Student Personnel: A Current Estimate," Journal of College Student Personnel 14 (January 1973): 5.

⁹⁰Paul L. Dressel, "Measuring the Benefits of Student Personnel Work," Journal of Higher Education 44 (January 1973): 15-26.

onment, on the characteristics of the processes that go on, or on the attainment of outcomes. I wish to emphasize the evaluation of outcomes since here reside the benefits."⁹¹ He stated, however, that the ultimate question of whether these benefits actually derived are worth the cost in comparison to benefits foregone, is, and is likely to remain unanswerable.

Of the dissertations written during the past twenty-five years, eighty were identified which attempted to investigate and/or evaluate student personnel services in higher education.⁹² Four categories of research were apparent. The largest category (38 dissertations) contained dissertations which attempted to ascertain perceptions and reactions of administrators, faculty, student, and student personnel workers regarding effectiveness of student personnel services. The second category, consisting of 23 dissertations, focused upon examination of the purposes, organization and administration of student personnel services. In the third category, numbering 15 dissertations, were efforts to determine criteria and produce evaluation methods. The fourth category contained 4 dissertations which surveyed the scope and quantity of student personnel services.

Throughout the recommendations and implications of this body of work, and of the published works previously re-

⁹¹Ibid., p. 22.

⁹²See Appendix B for list of dissertations pertaining to evaluation of student personnel services.

viewed, are three dominant themes. The first is that student personnel services as they exist in higher education institutions have not been adequately or accurately evaluated. The second theme is that the methods and instruments currently being employed are not sufficient in scope and/or sophistication to successfully fulfill the existing and recognized need. Finally, the necessary step of identifying and measuring desired criteria has not been accomplished.

Goals, Objectives, and Outcomes for Higher Education

In this section, literature relevant to the output component of the productivity measure is discussed. Topics include goal-setting, delineation of objectives (with particular emphasis upon management-by-objectives), and identification of outcome measures.

Goal-Setting

Personal declarations about goals for higher education are readily available. In Whose Goals for American Higher Education?⁹³ for example, Philip Werdell argued for teaching and learning as basic functions; Lyle-Spencer argued for research; John Corson for public service; Kenneth Keniston for social criticism; and Walter Lippman for spiritual and intellectual guidance for the nation. While these viewpoints may be helpful, an institution must be able to select and articu-

⁹³C. G. Dobbins and C. B. T. Lee, Whose Goals for American Higher Education? (Washington, D.C.: American Council on Education, 1968).

ulate goals which are meaningful to their constituencies. An efficient method for obtaining such information has been the focus of several studies.

First, Gross and Grambsch's⁹⁴ work in 1968 stands as a most significant empirical effort to examine the nature of university goals, especially as they existed in the perception of faculty and administrators. Using an inventory of 47 goal statements, which respondents rated in terms of present and preferred importance, the authors found that general differences in goal definition between faculty and administrators were negligible.

The second goals study, done by the Danforth Foundation in 1969, utilized a shortened and revised version of Gross and Grambsch's inventory to identify goals at 14 private liberal arts colleges.⁹⁵ Significant agreement was found among faculty, administrators, and students on most matters related to college goals and governance.

Sieber et al.⁹⁶ reported the results of a third study in which a form containing 64 goal statements was sent to the academic dean of every college in the country. Deans indicated the extent to which their college emphasized a goal;

⁹⁴E.W. Gross and P.V. Grambsch, University Goals and Academic Power (Washington, D.C.: American Council on Education, 1968).

⁹⁵Danforth Foundation, "A Report: College Goals and Governance," Danforth News and Notes (n.p., November 1969).

⁹⁶S.D. Sieber et al., A Taxonomy of Higher Education (New York: Columbia University, Bureau of Applied Social Research, March 1968).

results demonstrated that various institutions had differing goals, although there was some universal agreement on a few goals. The results were limited to responses of academic deans and did not represent opinions of important campus groups.

Analysis of college goals was a facet of a study done by 13 member colleges of the Council for Advancement of Small Colleges.⁹⁷ Faculty and administrators ranked stated desired characteristics of graduates in terms of importance to the institution.

The instruments utilized in these four studies were designed for a specific type of institution and/or respondents. The Educational Testing Service (ETS) endeavored to provide a single instrument to identify goals for colleges and universities as seen by both on- and off-campus groups. To this end, a preliminary Institutional Goals Inventory (IGI) was constructed in 1969.

The preliminary form of the IGI contains 100 statements of plausible institutional goals. . . to which the respondents--students, faculty, administrators, alumni, trustees, members of the immediate community, or whatever--indicate the extent to which they feel each statement is and should be a goal of the institution.⁹⁸

This preliminary IGI was used in a study by Uhls, funded by the National Laboratory for Higher Education. General purpose of the study was to investigate the suitability of combining a goals instrument with the Delphi technique to help

⁹⁷Arthur W. Chickering et al., Research and Action, Third Annual Progress Report, Project on Student Development at Selected Small Colleges (n.p., March 1968).

⁹⁸Hartnett, "Accountability in Higher Education," pp. 11-12.

institutions achieve better understanding of their goals as seen by on- and off-campus groups. Uhl's general conclusion was: "The instrumentation and technique used in this study to assess the present and preferred goals of five colleges and universities with quite different characteristics were successful."⁹⁹

In 1971, Peterson and Morstain undertook a modification of the preliminary IGI, and administered it to samples of students and faculty at ten institutions on the West Coast. Results of the West Coast Pilot Project were reported by Peterson together with his exposition of the importance of the goal-setting process.

Absolutely critical to a college's planning, evaluation, and related institutional-renewal activities is a consciousness among people on the campus of the goals of the institution. Planning makes no sense unless the planners know what ends they are seeking to realize or maximize. Program objectives have coherence to the extent that they reflect broader institutional goals. Assessment of institutional effectiveness is most sensibly understood as determination of the extent to which acknowledged goals are being achieved. Indeed, one could conclude that no decision on the campus makes sense unless it is taken with reference to accepted college goals. Beyond these rather pragmatic uses, such goals are the fundamentals of an institution's policy, ideology, and values, providing a focus for loyalty, professional commitment, and genuine community.¹⁰⁰

A 1972 dissertation by Harshman¹⁰¹ related the process

⁹⁹Norman P. Uhl, Identifying Institutional Goals Emerging Convergence of Opinion Through the Delphi Technique (Durham, N.C.: National Laboratory for Higher Education, 1971), p. 49.

¹⁰⁰Richard E. Peterson, College Goals and the Challenge of Effectiveness (Princeton: Institutional Research Program for Higher Education, ETS, 1971), p. 5.

¹⁰¹Carl Leonard Harshman, "An Analytical Model for Institutional Goal Development: A Survey of Selected Student Per-

of goal-setting to student personnel services. His review of the major studies (Gross and Grambsch, Uhl, and Peterson), revealed three major shortcomings for student personnel services.

1. None of the research identified college student personnel as an independent constituency. Rather, it was included in the administrative group.
2. Survey instruments do not adequately represent the concerns of student development.
3. None of the studies tested hypotheses or analyzed data in other than descriptive or correlational ways.

Derivation of Objectives and Use of the Management-by-Objectives Method

Whereas goals are the broad, generalized ends of a higher education system, objectives are specified, measurable ends of each component of the system. It is necessary to formulate and specify objectives in order to bring goals to an operational level. An objective can be defined, therefore, as a "quantifiable and/or observable achievement accomplished under specifiable conditions."¹⁰²

Van Wijk and Young delineate essential concepts related to an objective:

1. There is the idea of directing an existing situation towards a desired end. Energy in the form of monetaty

sonnel Workers in Ohio Higher Education" (Ph.D. dissertation, Ohio State University, 1972).

¹⁰²Educational Goals and Objectives (California School Board Association, September 1969), p. 7, cited by Alfons P. Van Wijk and Barbara J. Young, "Objectives, Program Structure and Evaluation in Higher Education: An Introduction" (Toronto: University of Toronto, Institute for Policy Analysis, n.d.), p. 6.

funds or human endeavor is spent in various ways to accomplish the objective . . .

2. The objectives should suggest ways to measure and control the effectiveness of these alternatives . . .

3. Objectives can be found at various levels in the organization; primary objectives which assume significance for the whole organization and secondary objectives which support the primary ones but are identified at a precise structural level, e.g., an objective found at the activity level.¹⁰³

Numerous taxonomies and definitions of objectives exist in the literature of education. The need, value, and characteristics of objectives are not at issue. The focus here is upon formulation of objectives for student personnel services, i.e., for an activity level of a higher education institution. One way to do so is through the application of the management-by-objectives (MBO) process, because one product of the MBO process is a set of measurable objectives.

The term "management-by-objectives" was first used by Drucker¹⁰⁴ in 1954. Odiorne's work,¹⁰⁵ published in 1965, operationalized the concept and initiated an extensive amount of literature describing the adoption and application of MBO to the field of management in the United States.¹⁰⁶ In recent

¹⁰³Van Wijk and Young, Ibid., p. 6.

¹⁰⁴Peter Drucker, The Practice of Management (New York: Harper and Row, 1954).

¹⁰⁵George S. Odiorne, Management by Objectives (New York: Pitman, 1965).

¹⁰⁶Louise Bower, comp., "Bibliography No. 1 - Management by Objectives, February 1973," and "Supplement to Bibliography No. 1, November 1974" (Evanston, Ill.: Northwestern University, The Management Library, n.d.). These two bibliographies list 108 articles and 33 books published between January 1964 and October 1974 pertaining to MBO in the busi-

years, MBO has been similarly applied to the management of higher education as evidenced by a vast amount of literature and research. Two criteria were used to select literature reviewed here: MBO as it pertains to the community college, and MBO applied to student personnel services in higher education.

Several authors have examined MBO in the community college setting. In a 1971 paper, Collins stated that MBO was implemented to "increase productivity, improve planning, maximize profits, more objectively evaluate managerial performance, and improve organizational morale."¹⁰⁷ He continued by describing advantages of MBO, the problems encountered, and implications for use in the community college.

Lahti has become a leading exponent on the application of MBO to the community college setting. An article in 1971,¹⁰⁸ which described MBO at a particular institution, was followed by a 1972 article in which he discussed requisites for implementation.¹⁰⁹ Innovative College Management,¹¹⁰ published in 1973, was a guide for higher education administrators who wish to implement MBO in their institutions. It provided

ness and industrial setting. In addition, there is at least one journal and one newsletter devoted exclusively to MBO.

¹⁰⁷Collins, Management by Objectives, p. 3.

¹⁰⁸Lahti, "Management by Objectives," pp. 31-33.

¹⁰⁹Lahti, "Implementing the System Means Learning to Manage Your Objectives," pp. 43-46.

¹¹⁰Lahti, Innovative College Management.

theory and specific procedures for adopting MBO to individual colleges.

Roueche et al. called upon MBO to describe a system of change whereby community colleges might become more accountable.

Results (the fulfillment of objectives) which allow the college to accomplish its mission permit the institution and its personnel to be accountable to the constituency served by the college. Commitment to a policy statement which is performance- and objective-based permits an institution to start where it is and to make an initial jump into operating procedures which offer some assurance that outcomes will be desired ones.

The process described above is known as 'management-by-objectives.'¹¹¹

More recently, Deegan et al. "review[ed] the process, progress, and problems of management by objectives as a management technique, to help deal with the many problems that confront community college educators in the 70's."¹¹² Following this analysis of MBO was a description of the program at Mt. San Jacinto College in California.

Chronister¹¹³ also discussed implementation of MBO in the community college, and summarized the premise and rationale which justify its use. MBO, by making clearer the goal, enhances the chances of accomplishing it, and provides a yardstick by which to measure progress.

¹¹¹Roueche et al., Accountability and the Community College, p. 24.

¹¹²Deegan et al., Community College Management, p. 2.

¹¹³Jay L. Chronister, "Implementing Management by Objectives," Community College Review 2 (Spring 1974): 61-9.

Finally, Kennedy¹¹⁴ linked the application of MBO to planning for accountability. He considered planning to be the most critical function of management, and maintained that MBO is an appropriate way to accomplish it.

MBO has been applied to the student personnel services dimension of higher education. In discussing the relationship between MBO and the student affairs operation, Abbott contended that MBO is a viable tool for "both providing for organizational purposes or goals and for providing consideration for subordinates."¹¹⁵ He examined implementation of MBO in the student affairs area together with problems and limitations that must be recognized.

Harvey changed MBO to ABO (administration by objectives) in discussing the MBO process in the educational setting. His article focused upon ABO in the student personnel area, and concentrated on the importance of setting objectives as a key to success. He concluded:

The ABO system outlined above is a cousin to the behavioral objectives and a systems approach to education. It applies some of the same techniques to the administrative process and holds the same hope that ~~it~~¹¹⁶ will make us more efficient and more accountable.

The application of MBO to student personnel services

¹¹⁴Kennedy, "Planning for Accountability Via Management by Objectives," pp. 348-54.

¹¹⁵Bernard J. Abbott, "Organizational Leadership and Management by Objectives With Emphasis on Student Affairs Operations," MSU Orient 6 (Fall 1971): 17.

¹¹⁶James Harvey, "Administration by Objectives in Student Personnel Programs," Journal of College Student Personnel 13 (July 1972): 296.

at specific institutions has been described by several authors. Braaksma¹¹⁷ discussed implementation in the residence hall system at Michigan State University, Dannemiller¹¹⁸ reviewed progress in the Department of Student Services at the University of Michigan, Schoderbek¹¹⁹ conducted a seminar on MBO for the Division of Dormitories and Food Services at Michigan State University, and Zatechka¹²⁰ investigated attitudes and perceptions of residence hall staff at Michigan State University toward implementation of MBO.

Finally, Vande Guchte¹²¹ examined the relationship between use of MBO and perceived effectiveness of community college student personnel units. The results of a study which included eight Michigan community colleges indicated that student personnel units which fully use MBO evidence greater perceived presence of each of the characteristics of effectiveness than those units which do not use MBO.

¹¹⁷Braaksma, "RHPO and MBO."

¹¹⁸Kathleen Dannemiller, untitled booklet "describing first year and a half of the implementation of MBO in Student Services" (Ann Arbor: University of Michigan, 4 January 1973).

¹¹⁹Peter P. Schoderbek, "Management by Objectives Seminar," Gull Lake Conference Center (n.p., 1971).

¹²⁰Douglas S. Zatechka, "An Exploratory Study of Michigan State University Residence Hall Staff Attitudes and Perceptions Concerning the Implementation of a Management by Objectives System" (Ph.D. dissertation, Michigan State University, 1974).

¹²¹Peter Vande Guchte, "A Study of Relationships Between the Use of Management-by-Objectives and Perceived Effectiveness in Selected Community Junior College Student Personnel Units" (Ph.D. dissertation, Western Michigan University, 1973).

Identification and Use of Outcome Measures

In natural sequence after goal-setting and delineation of objectives, is the necessity to identify outcome measures, or results achieved in the pursuit of objectives which in turn were the operationalization of the institution's goals. Lawrence summarized the relationship: ". . . an assessment of the outcomes of higher education becomes the means for relating the programs, activities, and resources utilized in higher education to educational goals."¹²² This relationship may also be characterized as an indication of effectiveness. Further, when outcomes can be related to cost (see Cost Input and Cost Analysis, p. 66), an indication of efficiency is available.

The need for outcome measures was succinctly stated by Balderston.

. . . we have bumped hard into the question of outputs and its measurement because, among other things, we are seeking now to link the resources used to the results achieved--in other words, to link inputs with outputs. It turns out that in the long history of concern about the processes and activities of education, we have achieved only a very imperfect grasp of the nature of its results. We are having to tackle the problems of output definition and measurement under forced draft, for higher education has come to the front of public attention both as a major social problem and as a major contributor to social change and economic development.¹²³

¹²²Ben Lawrence, "Recent Developments and Future Directions of Research on Planning and Management Systems in Higher Education," paper presented to the Statewide Conference on Planning and Management Systems for Post-Secondary Education (East Lansing: Michigan State University, 29 January 1973), p. 33.

¹²³Lawrence et al., eds., Outputs of Higher Education,

Micek and Arney¹²⁴ cited three issues relevant to the need for a greater variety of outcome measures. First, measurement of outcomes should extend beyond the intellectual to also include the affective domain of students. Second, it must be recognized that college experience is future-oriented. Consequently data must be longitudinal and it should include both institutional aggregated and individual-centered measures. Third, there is an accelerating trend toward universal higher education, necessitating outcome measures of experiences different from those of traditional liberal arts colleges and large universities.

The usefulness of adequate outcome measures was described by Lawrence.¹²⁵ In addition to the relationship mentioned earlier (between results achieved and institutional goals), knowledge of outcomes enhances the planning and decision-making process, i.e., aids in making judgments and setting priorities. Also, outcome information facilitates communication among decision makers, and helps answer the question of whether goals set were actually attained.

At least four difficulties prevail among attempts to derive outcome measures. As enumerated by Micek and

Frederick E. Balderston, "Thinking About the Outputs of Higher Education," p. 11.

¹²⁴Sidney S. Micek and William Ray Arney, "Outcome-Oriented Planning in Higher Education: An Approach or an Impossibility?" (Boulder, Col.: WICHE, June 1973), pp. 16-17.

¹²⁵Lawrence, "Recent Developments and Future Directions of Research," pp. 33-35.

Wallhaus,¹²⁶ they include the following: few explicit measures of program effectiveness are currently available, available information is difficult to use since analytic and interpretative techniques are undeveloped, planners and decision makers have difficulty translating goals into terms of specific desired outcomes, and use of outcome data is thwarted by fear of potential misuse.

Despite the difficulties, substantial work has been undertaken to measure the outcomes of higher education. Micek and Wallhaus attempt to capsulize the nature of the work that has been accomplished and the potentials for future research in the chart reproduced on page 63.

The principal effort to identify and measure outcomes has been done by the National Center for Higher Education Management Systems (NCHEMS) at WICHE. "NCHEMS's first effort has been an attempt to develop an inventory of possible outcome variables with suggestions for their measurement."¹²⁷ Related projects include first, the Program Classification Structure (PCS), defined as "a system which categorizes the activities of an organization in a program-oriented framework that relates these activities to organizational objectives";¹²⁸ and second, the Outcomes project,

¹²⁶Sidney S. Micek and Robert A. Wallhaus, "An Introduction to the Identification and Uses of Higher Education Outcome Information Technical Report 40" (Boulder, Col.: NCHEMS at WICHE, March 1973), pp. 2-3.

¹²⁷Ibid., p. 16.

¹²⁸James R. Topping and Glenn K. Miyataka, "Program Measures Technical Report 35" (Boulder, Col.: NCHEMS at WICHE, February 1973), p. 241.

COLLEGE IMPACT RESEARCH		
	Focus of the Research	Outcomes Examined
COLLEGE IMPACT ON STUDENTS	-Short Time Horizons	Knowledge
	-Macro Studies	Skills
	-Model of Student Inputs, Environment/ Process, Student Outputs	Values and Attitudes
	-Utilizes Primarily Test and Questionnaire Data	Competence
COLLEGE IMPACT ON GRADUATES	-Long Time Horizons	Vocational Preparation
	-Macro Studies	Earning Power
	-Historical Time Series Data (Census, etc.)	Redistribution of Wealth
	-Focuses on Economic and Labor Factors	Rate of Return
		Socioeconomic Mobility
		Employment
COLLEGE IMPACT ON SOCIETY	-Medium-Range Horizons (1 to 10 years)	Intergenerational Effects
	-Macro Studies	GNP Factors
	-Empirical Data from Industry, Government, Social Agencies, etc.	Crime Rate
	-Focuses on Both Social and Economic Factors	Manpower Supply/Demand
		High Risk/High Cost Subpopulations (Welfare, Mental Health, etc.)
		Social Participation

SOURCE: Sidney S. Micek and Robert A. Wallhaus, "An Introduction to the Identification and Uses of Higher Education Outcome Information Technical Report 40" (Boulder, Col.: NCHEMS at WICHE, March 1973), p. 11.

. . . involved with the development of structures, measures, procedures, and analyses appropriate for including the outcomes and impacts of postsecondary education in the postsecondary education planning and management process at the institution, state, and federal levels.¹²⁹

Throughout the NCHEMS work, outcome measure is defined as "program measures that quantitatively express the outcomes achieved or the products generated by the activities of a program element during a stated time period."¹³⁰

To totally accomplish outcome-oriented planning and management of higher education, a long-range large-scale program must be undertaken. Micek and Wallhaus have stated what such a program needs to accomplish.

1. The development of better outcome measures, and the identification of relationships between these measures. (This is primarily a research problem involving specific measurement studies and improving measurement technologies.
2. The establishment of linkages between outcome measures and other measures of the components of higher education.
3. Continual improvement of the conceptualization and understanding of the outcomes assessment problem in higher education.
4. The development of a taxonomy of higher education outcome variables that identifies and defines the associated outcome measures that are currently available. (This product must have a very pragmatic orientation.
5. The development of guidelines and procedures for utilizing outcome measures and assessment methodologies that have short-term payoffs and can be built upon for longer-term improvements.

¹²⁹Ibid., p. 239.

¹³⁰Ibid.

6. Finally, the promotion of the use of outcome information in the planning and management processes in all sectors and levels of higher education.¹³¹

Such a program is currently underway at NCHEMS. Introduction to it was the subject of Technical Report 40. Two phases were subsequently completed and described in follow-up publications. Phase I aimed toward identification of outcome measures. The method used was a survey administered nationally to college administrators and state-level decision makers; results were reported in November 1974.¹³² Phase II was designed to develop operational definitions and data acquisition procedures for the top-priority outcome measures identified in Phase I. A preliminary report on Phase II was published in May 1975.¹³³

Thus far, effort concerning outcomes has focused upon the instructional component of higher education and upon total institutions. It will be some time before the techniques are refined and applicable to less comprehensive components of higher education institutions.

One attempt to measure the outcomes of the student personnel component of higher education is the "IRC Model for Input-Output Analysis of Student Personnel Services"

¹³¹Micek and Wallhaus, "An Introduction to the Identification and Uses of Higher Education Outcome Information," pp. 14-15.

¹³²Sidney S. Micek and William Ray Arney, "The Higher Education Outcome Measures Identification Study A Descriptive Summary" (Boulder, Col.: NCHEMS at WICHE, November 1974).

¹³³Sidney S. Micek, Allan L. Service, and Yong S. Lee, "Outcome Measures and Procedures Manual Field Review Edition Technical Report 70" (Boulder, Col.: NCHEMS at WICHE, May 1975).

cooperatively developed by twenty-six Florida community and junior colleges. Three instruments comprise the model: Assessment of Student Personnel Objectives, Assessment of Outputs for Student Personnel Services, and Guide for Cost Analysis of Student Personnel Services Strategies. Some of the uses for outcome measures enumerated by Lawrence are confirmed in the application of the IRC Model.

The IRC Model has not only provided information needed for participating colleges to adjust their efforts in the direction of areas with indicated needs, but resulted in better understanding by both faculty and students of the role of student personnel services.¹³⁴

Cost Input and Cost Analysis

Previous discussion focused upon the output portion of the productivity model. To complete the model, inputs, or costs expended on resources to achieve the objectives, need to be considered before a relationship can be drawn between input and output. Literature relevant to cost input is discussed in this section.

When discussing costs of higher education, parameters must immediately be drawn. Excluded from this review are cost-benefit (or effectiveness) analysis, and economic theories which regard investment in human capital as an indicator of future productivity. Further, there is no attempt to assess and judge present and proposed methods of financing for higher

¹³⁴James L. Wattenbarger and John M. Nickens, The IRC Model for Input-Output Analysis of Student Personnel Services (Gainesville: University of Florida, Florida Community Junior College Inter-Institutional Research Council, 1973), p. i.

education, nor to document and judge the dimensions of whatever financial crises face higher education. Succinctly, the focus here is upon how to measure the costs expended in the attainment of specified objectives as measured by actual outputs.

Within this framework, however, are several problems: inputs must be identified, costs assigned to them, outputs defined, and finally, relationships established between cost input and output. A final consideration is whether to consider the total institution, or to limit costing of inputs to some smaller segment such as a department within the college.

Despite the difficulties, the benefits of studying costs are substantial and fully justify the effort.

When a college launches a move toward more effective use of resources, no step is more important than a careful analysis of costs, in relation not only to appropriate measures of input, . . . but also in relation, ¹³⁵ to appropriate measures of output or quality, . . . (Italics mine.)

Mowbray and Levine have alleged that "Better information on the costs of education can make a contribution to both the planning of education and evaluation of results."¹³⁶ The present need is two-fold: a way to relate costs of the institution to its activities, and procedures for comparing

¹³⁵ Carnegie Commission on Higher Education, The More Effective Use of Resources An Imperative for Higher Education (New York: McGraw-Hill Book Company, June 1972), p. i.

¹³⁶ George Mowbray and Jack B. Levine, "The Development and Implementation of CAMPUS: A Computer-Based Planning and Budgeting System for Universities and Colleges," reprinted from Educational Technology, 1971, p. 1.

costs of doing things in different ways in the future. At present, traditional accounting systems utilized by colleges and universities do not fulfill these needs. Toombs confirmed this assessment: "The traditional form of fund accounting and budgeting links allocations to administrative units rather than to specific activities."¹³⁷

In a study which investigated costing techniques and resource allocation in higher education, Bottomley provided a useful definition and distinction for the term "costs."

The uses of cost figures are, very broadly, two-fold-- 'accounting' uses, and 'planning' uses. In the category of 'accounting' uses are included any ex post exercises in allocating costs that have already been incurred to outputs that have already been produced. The category of 'planning' uses includes any exercise involving the estimation of costs that will in the future be incurred to produce output.¹³⁸

It would seem that "accounting" costs would be applicable to the need cited by Mowbray and Levine for evaluation, and that "planning" costs would serve the need for comparing alternative methods of future operations.

Cavanaugh¹³⁹ examined the progress of higher education toward resolving the need for better analysis of costs. In his monograph four objectives were cited: (1) to examine and evaluate materials on cost analysis; (2) to explain the

¹³⁷Toombs, Productivity, p. 22.

¹³⁸J.A. Bottomley, Cost Effectiveness in Higher Education (England: Bradford University, July 1971), p. 1.

¹³⁹Alfred D. Cavanaugh, "A Preliminary Evaluation of Cost Studies in Higher Education" (Berkeley: California University, Office of Institutional Research, October 1969).

basic techniques of cost studies and the uses to which they've been put; (3) to identify the values of cost analysis as an administrative tool; and (4) to determine whether the cost figures supplied by institutions could be used for inter-institutional comparison. He warned at the onset that "Any study of cost analysis procedures is severely handicapped by the scantiness of the literature."¹⁴⁰

Fulfillment of his first two objectives comprised the body of his work. He cited the 1935 cost-analysis procedures published under the auspices of three regional associations,¹⁴¹ and affirmed its soundness in stating that a revision of this work was included in the 1952 edition of College and Business Administration published by ACE, and again revised in 1968.

Cavanaugh's second objective concerned procedures and uses of cost analysis. After data are collected, either from accounting records or budget, there are at least three ways to organize and present it. First, is a simple organized listing of total expenditures. A second method is to determine the percentage of funds distributed to different expense categories and note how these expenditures varied over time. The third method, most common, is derivation of unit costs. He explained the method and its association with productivity.

¹⁴⁰Ibid., p. i.

¹⁴¹The National Committee on Standard Reports for Institutions of Higher Learning, Financial Reports for Colleges and Universities (Chicago: University of Chicago Press, 1935), cited by Cavanaugh, Ibid., p. ii.

In essence, the expenditures, which, to use the rather unfortunate terminology which has grown up around educational cost analysis, represent 'input,' are divided by the number of units of 'output,' whatever these may be considered to be, and the resulting figure becomes a cost per unit of 'production.'¹⁴²

Continuing with the industrial analogy, one can see at once there will be a great difference of opinion as to what is actually 'produced' in the educational process. It is no help to say that knowledge is produced, because there is no way of directly quantifying it. If unit costs are to be developed at all, one needs measures that are quantifiable and which stand in some meaningful relationship to the abstract product which cannot be measured directly. The choices are all among fairly inadequate alternatives, but the choice must be made if unit cost data are to be derived at all.¹⁴³

Various authors have appraised unit costs. As early as 1958, Doi and Russell identified the central issue pertinent to the use of unit costs.

Perhaps the most valid criticism, of the many that have been made, stems from the difficulty of identifying an appropriate unit for measuring the production of service to be used in the calculations. For such categories of expenditures as instructional salaries, the full-time-equivalent student or the student-credit-hour produced appears to be the most appropriate unit. But for other functions, such as organized research and organized activities related to instructional departments, no satisfactory unit of production or service has yet been identified.¹⁴⁴

Topping defined unit cost analysis as

. . . relating a group of costs to some unit of measurement. This merely ensures some degree of comparability; raw data cannot be compared unless some unit of measurement is introduced. The problem begins with the selec-

¹⁴²Cavanaugh, "A Preliminary Evaluation of Cost Studies in Higher Education," p. 6.

¹⁴³Ibid., p. 7.

¹⁴⁴Encyclopedia of Educational Research, 1960 ed., s.v., "Finance-Colleges and Universities," by James I. Doi and John Dale Russell (New York: MacMillan Company, 1960), p. 546.

tion of the numerator (the group of costs under consideration) and the selection of the denominator (the unit of measurement). A logical relationship must exist between the numerator and the denominator in order to produce a usable cost measure.¹⁴⁵

Sims contended that unit cost studies might become an integral part of the funding process for junior colleges. He discussed the major tasks of a cost study, reviewed the problems encountered, and clarified some relevant terminology. Unit costing is "the process of identifying the cost of producing a product or performing a service with costs assigned in terms of units of product or service rendered."¹⁴⁶ He also distinguished between cost accounting and cost finding. The former applies accounting principles in determination of unit costs of production. It is a method in which production costs are accumulated and distributed to cost centers on an equitable basis. Data are historical. The latter is a separate system, which may utilize cost accounting data in conjunction with other institutional data, to allocate costs to activities. Finally, a cost center is "the smallest unit or segment of operations for which costs are collected."¹⁴⁷

Cost-finding procedures have superceded traditional

¹⁴⁵James R. Topping, "Unit Costs Analysis Tells Where Your Money Goes--and Why," College and University Business 53 (June 1972), p. 46.

¹⁴⁶Wayne Stumph, "A Cost-Finding Primer for Post Secondary Schools," (unpublished monograph, Bellville, Ill., February 1972), quoted by Howard D. Sims, "A Master Plan for Unit Cost Studies Among Community Junior Colleges" (Tallahassee: Florida State University, Center for State and Regional Leadership, Department of Higher Education, August 1972), p. 2.

¹⁴⁷Sims, "A Master Plan for Unit Cost Studies," p. 23.

cost accounting for three reasons. Toombs enumerates:

(1) Most programs have substantial costs that are easily overlooked or underestimated. (2) Similar institutions exhibit large differences in average costs. (3) Patterns of change in costs differ among industries, and among institutions rarely following a linear form.¹⁴⁸

The principles of cost-finding and emphasis on unit costs characterize the work currently in progress by NCHEMS. Their cost-finding definition echoes Sims:

An analytical process periodically used in lieu of a formal cost accounting system, making use of accounting data as well as other data available within the institution to arrive at unit cost information for activities conducted by the institution.¹⁴⁹

Related projects at NCHEMS serve as the basis for the formulation of structure, measures, and procedures. These include the PCS (see page 62), which defines a structure for organizing the activities of higher education in a standard way; and the Faculty Activity Analysis Procedures Manual, which illustrates a faculty survey instrument and recommends procedures for conducting a survey.

Originally designed "to develop a uniform set of standards, definitions, and alternative procedures that would use accounting and statistical data to find the full cost of resources used in the process of achieving institutional objectives,"¹⁵⁰ the Cost Finding Principles project serves

¹⁴⁸Toombs, Productivity, p. 23.

¹⁴⁹James R. Topping, "Cost Analysis Manual Field Review Edition, Technical Report 45" (Boulder, Col.: NCHEMS at WICHE, 1974), p. 190.

¹⁵⁰Ibid., p. 1.

the following purposes.¹⁵¹

1. Improve capabilities for internal management
 - a. "flagging" possible problem areas for more detailed investigations that may or may not result in a reallocation of resources
 - b. provide parameters for future budgeting
 - c. develop software to assist in calculations of cost
2. Facilitate interinstitutional data exchange
3. Improve capabilities for external agency reporting

A follow-up to both the cost-finding and outcomes work at NCHEMS is the Information Exchange Procedures (IEP) Project. Institutions were invited to participate in an IEP Implementation project conducted in 1974-75. Basically, the IEP is "a set of standard definitions and procedures for collecting institutional information related to: costs of disciplines and degree programs, outcomes of instructional programs, and general institutional characteristics."¹⁵² Results of the project, together with a set of definitions and procedures, were published in a 1975 report.¹⁵³

Similar to the work at NCHEMS is a model developed at the University of Kentucky "for the purpose of estimating either the average direct cost or average full cost of in-

¹⁵¹Ibid., pp. 1-5.

¹⁵²Charles W. Manning and Robert A. Huff, "A Prospectus on the NCHEMS Information Exchange Procedures Implementation Project 1974-75" (Boulder, Col.: NCHEMS at WICHE, September 1974), p. 1.

¹⁵³Maureen Byers, "Information Exchange Procedures Outcomes Study Procedures" (Boulder, Col.: NCHEMS at WICHE, February 1975).

structional outputs at the departmental level."¹⁵⁴ It is not intended to be as comprehensive and sophisticated as the NCHEMS model.

Rather, the thrust has been toward the development of a costing tool which utilizes readily available aggregate expenditure data to estimate the full cost of generating various types of instructional outputs at the departmental level, i.e., cost per student credit hour by course level, and the cost of supervising different types of students.¹⁵⁵

Both the NCHEMS and University of Kentucky models incorporated student personnel services into total institutional costs. The IRC Model (see pages 65-66), however, isolates cost analysis of student personnel services. Used in conjunction with two other instruments ("Student Personnel Services Objectives Assessment," and "Assessment of Outputs for Student Personnel Services"), the "Guide for Cost Analysis of Student Personnel Services Strategies"

enables each person in student service activities to indicate the percentage of his or her time during the year that was devoted to achieving each objective, and the percent of this time spent on each strategy used to achieve the objective.¹⁵⁶

Accompanying this Guide is a computational procedure for determining the actual dollar costs.

These models seem to offer the most viable means extant for an institution that wishes to undertake cost analysis of

¹⁵⁴Thomas G. Braun and Jack B. Jordan, "Model Provides a Method for Putting Costs in Their Place," College and University Business 55 (December 1973): p. 20.

¹⁵⁵Ibid.

¹⁵⁶Wattenbarger and Nickens, The IRC Model for Input-Output Analysis of Student Personnel Services, p. 4.

any portion or the totality of its educational endeavors.

The Financial Aids Function
of Student Personnel Services

The financial aids function of student personnel services has long been recognized as a necessary and appropriate service activity. In 1949, the American Council on Education described the types of services which help make up a student personnel program. Among them was "Financial aid to worthy students . . . as an educational experience in personal budgeting and responsibility."¹⁵⁷

In the 1965 Raines study, which proposed a taxonomy for student personnel services, financial aids was named as an essential service function. In the following, the rationale and scope of a contemporary financial aids program is summarized.

'Working one's way through college' embodying the tradition of self-help and economic independence from one's parents has been characteristic of a certain percentage of American college students from early times. With the costs of attending college rising as much as 10 per cent each year, it appears that both students and the government (district, state and/or national) will necessarily need greater financial resources in the future to pay for education.

Therefore, both part-time jobs and financial subsidy, in the form of loans, grants or work scholarships, are becoming a greater necessity for an ever-increasing number of students. The student personnel worker plays a crucial role in working with students whose entrance into or continuation in college is impaired by lack of finances.¹⁵⁸

¹⁵⁷Blaesser and Crookston, "Student Personnel Work-College and University," p. 1417.

¹⁵⁸Junior College Student Personnel Programs, Raines, Fordyce et al., "A Taxonomy of Junior College Student Personnel Services," pp. 16-17.

Monroe affirmed the necessity of financial aids as a service function in his description of student personnel services for community colleges. And in the context of a broadened and increasingly complex financial aids picture, a specially trained administrator is essential.

With the advent of large amounts of federal work-study money, student loans, and state and private scholarships, an expert financial-aids person, with some background in accounting has become essential. In other words, financial aid has become big business for community colleges to administer, and the granting agencies usually require carefully prepared applications from the students and accurate reports on the use of funds. In fact, it is no simple task for the personnel staff to keep abreast of the many scholarships and loan funds. Large urban community colleges have also found it expedient to hire a person who knows how to procure student-assistance funds for the college. The business of procuring funds has, for all practical purposes, become a science beyond the grasp of an amateur financial-aids person.¹⁵⁹

Finally, the NCHEMS Cost Analysis Manual presents the most comprehensive and contemporary definition of financial aids as the function is undertaken in higher educational institutions.

(Financial aids) Includes all grants, loans, or work/study assistance to students awarded by and/or administered through the institution. This aid can be derived from federal, state, local, private, or institutional sources.

(1) Grants: All stipends, tuition, fee remissions, and gifts to students that are outright awards and are not contingent upon services to be rendered by the student. Includes all fellowships and scholarships to graduates or under-graduates. Also included are any funds from specialized training grants which are specifically designated for stipends as well as tuition waivers for re-funds, as long as the grant is need-based. The Educational Opportunity Grants (EOG) would be included here.

¹⁵⁹ Charles R. Monroe, Profile of the Community College (San Francisco: Jossey-Bass Inc., Publishers, 1972), p. 176.

(2) Loans: Funds made available to students for assistance on a loan basis. The source of these funds may be gifts, endowment income, other institutional funds, private sources, and/or appropriations or governmental agencies. National Defense Student Loans would be included here. Excluded are short-term loans (usually three months) available to students regardless of need.

(3) Work/Study Assistance: The extension of financial aid support to students through the College Work/Study Program in which federal or state government contributes partial monies for the payment of services rendered by students and required for financial assistance.¹⁶⁰

In this study the financial aids function of Lansing Community College was chosen to illustrate productivity measures needed to formulate a model. Selection of this particular function was appropriate in view of the scope and impact of the financial aids department at that college. In the academic year on which this study focused, financial aid was granted to approximately 4000 students, representing almost 25% of the total enrollment. Awards granted numbered approximately 5700, and the monies dispensed approached a total of two million dollars.¹⁶¹ Clearly, this was a substantial segment of the student personnel department.

Summary of Literature Reviewed

In this chapter, selected literature concerning the conceptual setting and components of a productivity model were reviewed.

¹⁶⁰Topping, "Cost Analysis Manual Field Review Edition Technical Report 45," pp. 194-95.

¹⁶¹"Lansing Community College Distribution of Financial Assistance," internal report of Financial Aids Office, Lansing Community College, May 1975. For copy of report see Appendix C.

Accountability and its various definitions were discussed in the first section. While historically precluded by the doctrine of educational determinism, accountability has currently assumed a foremost position in educational endeavors. Reasons noted in the literature for this recent emphasis included: shifting sense of purpose and accessibility for higher education, political and social changes, financial shortages (in part due to a widening credibility gap between higher education and its varied constituents), collective bargaining among faculty, and increased technical capabilities.

Emphasis on accountability has significant implications for higher education. Two forms of accountability which may result are output-oriented management methods, and utilization of external assessment.

Lessinger viewed accountability as a reflection of the demand for increased productivity. The concept of productivity was the subject of the second section of this chapter. Various definitions were reviewed, followed by discussion of productivity applied to the public sector, to service-oriented endeavors, and in particular to higher education. Despite potential limitations and legitimate conceptual concerns regarding application of productivity to higher education, it was recognized that first, productivity utility is not only viable, but second, that it may in fact be mandated by contemporary demands for accountability.

In the third section, efforts to evaluate student per-

sonnel services were summarized. An evident and major criticism of this effort was reliance upon survey and quantitative data. Several authors called for application of a more scientific method of inquiry. Difficulties which have characterized evaluation attempts included lack of adequate and/or established criteria, lack of longitudinal data, lack of stated goals against which to measure achievement, and lack of success in controlling or accounting for the many variables which affect the provision of student personnel services.

A review of dissertations concerned with evaluation of student personnel services confirmed the predominance of survey methods, revealed the same difficulties stated above, and further substantiated the allegation that student personnel services have not been adequately or accurately evaluated.

The fourth section of Chapter II was divided into three sub-sections. The first of these contained a review of major goal-setting efforts which have been undertaken within higher education. The second sub-section contained a definition of objectives and a description of the utilization of Management-by-Objectives to derive measurable objectives for both higher education in general, and for student personnel services in particular. Substantial application of MBO testifies to its usefulness as a viable method for identifying objectives and for implementing improved management methods in higher education. The third sub-section was a presentation of literature concerned with identification and measurement of outcomes for

higher education. Thus far, NCHEMS at WICHE has undertaken the most comprehensive effort toward this end.

Cost input and cost analysis were the subjects of the fourth section of the Chapter. There was a definition of costs which is pertinent to this study, followed by a review of the efforts undertaken to derive unit costs for higher educational institutions.

In the final section there was a description and definition of the financial aids function of student personnel services as it is currently defined and practiced in higher education institutions. Lastly, information summarizing the extent of financial aids within Lansing Community College was presented.

CHAPTER III

DERIVATION OF PRODUCTIVITY MEASURES

Five sections comprise Chapter III of this study. In the first, the goals and objectives of the financial aid department at Lansing Community College are delineated. These comprise the necessary common foundation for the output and input components of the productivity measures. The second and third sections contain description and illustration of the procedures employed to derive both input and output components of a productivity model. In a fourth section, the actual productivity measures for financial aids during the 1974-75 academic year are computed and displayed according to three unit measures: per number of students served, per number of awards granted, and per amount of dollars dispensed. In each case, the productivity measure is derived for achievement of each objective and for the composite of financial aids objectives. In the fifth section is a summary of the methods utilized and the results obtained in derivation of the productivity components.

Before proceeding to the major content of Chapter III, it seems appropriate to indicate why the format of one comprehensive chapter incorporating both method and result has been adopted in contrast to the conventional dichotomy of one chapter for methodology followed by one chapter for pre-

sentation of data. The format adopted is dictated by two conditions. First, the study itself departs from the traditional scientific inquiry in that it is not a statistical treatment within a specific research design. Rather, it is intended to be an exploratory and descriptive effort toward model-building. Hence, there is no body of data to be treated and reported in statistical fashion. Second, the nature of the data and information utilized do not lend themselves to conventional presentation. It has been selected and derived for illustrative purposes. It seems logical, therefore, to avoid redundancy by incorporating data into the explanation of and progression toward the building of the productivity model.

Goals and Objectives of Financial Aids

Because this study focuses upon achievement of a specific department within a community college, no attempt was made to relate performance to total institutional goals. Further, no procedure was employed to identify or arrive at a consensus of goals since the productivity model is designed for primary use by the administrator who allocates budget and responsibility within his department. Finally, Harshman's research relating goal-setting to student personnel services revealed major short-comings which preclude reliance upon the major goal-setting methodologies for derivation of specific student personnel goals.¹

¹Carl Leonard Harshman, "An Analytical Model for Institutional Goal Development: A Survey of Selected Student

The goals for financial aids, i.e., broad generalized intended ends, used as the basis for operationalizing objectives were those determined by the financial aid director at Lansing Community College. This method of goal-setting was appropriate within the parameters of the productivity model toward which this study aims, and was consistent with the philosophy of MBO. Goals delineated for the five year period (1970-1975) during which this study was undertaken were:

1. To obtain and make available adequate funding for financial aid to Lansing Community College students;
2. To develop, with the help of Data Processing, operational procedures to:
 - (a) monitor academic standing and progress of students receiving financial aid; and
 - (b) monitor the number of students, amount of funds, and degree of student need;
3. To develop an evaluation system for:
 - (a) the total financial aid department (via the MBO method), and
 - (b) the services to financial aid students (via student survey and/or evaluation instrument.²

Specific objectives for the financial aid department, in accordance with MBO methods, are mutually determined annually by the director of financial aids and his supervisor, i.e., the Dean of Students. For the year in which this study occurs, nine objectives were formulated (See Appendix D for MBO documents which include each objective accompanied by

Personnel Workers in Ohio Higher Education" (Ph.D. dissertation, Ohio State University, 1972).

²Neil Shriner, interview at Lansing Community College, Lansing, Michigan, 6 May 1975.

its evaluation criteria.) Of those, one (Number 7) pertained to implementation of a placement center by an administrator not yet hired, hence is tangential to the financial aids department and is excluded from consideration in this study. The remaining eight could be categorized according to the typology of objectives delineated by Odiorne³ for MBO: routine, resolution or problem-solving, creative or developmental, personal growth and development. They were:

1. To administer programs of student financial aids, employment placement, and veterans' services
(ROUTINE)
2. To plan, implement, and evaluate a comprehensive program of student financial aid including federal, state, institutional, and local private funds.
(ROUTINE)
3. To provide counseling services to students, in order to maximize the effectiveness of both the financial aids programs and the student employment program.
(ROUTINE)
4. To establish and maintain effective relationships with community agencies, business and industry in order to establish new financial aid sources and open doors for employment opportunities for students.
(ROUTINE)
5. To establish, implement, and evaluate new federal, state, institutional, private foundation, and local donor programs of financial assistance.
(DEVELOPMENTAL)
6. To plan, organize, and implement a more effective data processing system to maintain financial aid and college work study information and monitor all financial aid related to need and academic progress for federal financial aid programs.
(RESOLUTION)

³George S. Odiorne, Management by Objectives (New York: Pitman, 1965).

7. (objective excluded from consideration)
8. To evaluate the financial aids, placement and veterans' services to determine the effectiveness for students at the college.
(DEVELOPMENTAL)
9. To pursue a program of self-improvement in order to perform more effectively as an administrator.⁴
(PERSONAL)

These eight objectives were the departure point for deriving both the cost input and quality output components necessary for computing the productivity measure of the financial aids department.

Before proceeding to the derivation of either component, it seems appropriate to elaborate upon the role and responsibility of the financial aids director. This person not only delineated long-range goals and established (with concurrence of his supervisor) the specific annual objectives, but supervised and directed the entire financial aids function at Lansing Community College. A synopsis of his annual duties, therefore, would include formulation and deployment of the departmental budget, training and supervision of approximately ten staff members, completion of audits and reports, and maintenance of all operations necessary to serve an unduplicated clientele in excess of 4000 students.

Cost Component (Input Factor)
of the Productivity Measure

Two methods for deriving the cost to administer student personnel services were identified. While each contained

⁴"Administration by Objectives Documents, 1974-75" (Lan-

applicable procedures, neither was, by virtue of overall purpose and final product, unilaterally transferable as an appropriate method to derive cost input for a productivity model. The first method resulted from the Cost Finding Principles project at NCHEMS. It was described in a detailed procedures manual⁵ which guides the user through the cost finding process. The second method was developed in Florida through a statewide student personnel services consortium of twenty-six community and junior colleges. The instruments designed and results of the project were reported in The IRC Model for Input-Output Analysis of Student Personnel Services.⁶ Major facets of each method are presented in the following.

NCHEMS Model

Purpose of the NCHEMS costing procedures was:

. . . to give postsecondary education institutions a way to determine the full cost of resources used in achieving institutional objectives.⁷

The recommended procedures define the methodology for identifying, assigning, and allocating cost information to the programmatic activities of institutions of higher education.⁸

sing, Mi.: Lansing Community College, Division of Student Personnel Services, adopted 1 July 1974).

⁵James R. Topping, "Cost Analysis Manual Field Review Edition Technical Report 45" (Boulder, Col.: NCHEMS at WICHE, 1974).

⁶James L. Wattenbarger and John M. Nickens, The IRC Model for Input-Output Analysis of Student Personnel Services (Gainesville: University of Florida, Florida Community Junior College Inter-Institutional Research Council, 1973).

⁷Topping, "Cost Analysis Manual," p. v.

⁸Ibid., p. iii.

A four step process comprised cost findings. Included were: (1) account crossover, whereby accounts in a fund accounting system are matched with activity centers (as determined by a Program Classification Structure); (2) direct cost studies, whereby analyses of aggregate cost categories are conducted to gather additional information that aids in assignment of costs to activity centers; (3) capital cost studies, whereby analyses of capital asset records are performed to arrive at an annual use charge for use of capital assets; and (4) support cost allocation, whereby costs lodged in support activity centers are transferred to final cost objectives. For each of the four steps, various definitions and parameters are supplied to the user. Overall, the procedures were designed for a total institution, and aim to determine the full costs of all resources utilized to achieve institutional objectives.

IRC Model

In contrast to the NCHEMS model, the IRC model focused upon the student personnel dimension of the institution. Three instruments were constructed to correspond to and achieve a three-fold purpose.

. . . to assess the importance of objectives, how they are achieved, to what extent they are achieved, and how much it⁹ costs per objective per student in any given year.

After the initial steps were completed, the cost

⁹Wattenbarger and Nickens, The IRC Model for Input-Output Analysis of Student Personnel Services, p. i.

finding was achieved by allocating salary costs of personnel to specific objectives. All salaried personnel identified strategies used to achieve objectives, and determined the percentage of their time spent on each strategy. A computational procedure was used to calculate the total cost per FTE (full-time equivalent student) for each objective. Overall, the procedure was designed solely for student personnel services, and ultimately allocated salary costs alone to achievement of objectives.

Procedures Used to Formulate Cost Component

To devise a method of cost allocation appropriate to a productivity measure, facets of both the NCHEMS and IRC models were juxtaposed with newly formulated procedures. Four elements characterize the process: (1) categories, or base units to which costs are allocated; (2) dimension or measure used to allocate costs; (3) actual costs allocated; (4) outcome parameters of cost allocation. Each is explained in the following paragraphs.

(1) Whereas the NCHEMS model allocated cost to activity centers within the institution (as identified by a Program Classification Structure), both the IRC and the proposed productivity model utilize student personnel objectives as the basis for allocation. The IRC model, however, employed objectives identified through consensus of student personnel administrators. In the model proposed here, the objectives are those identified and agreed upon by a single administrator and his supervisor using the MBO method.

(2) The dimension or measure used to allocate costs in all three models was time expenditure, self-reported by the personnel in question. NCHEMS provided survey instruments where percentages of time were allocated to specified activities. IRC provided a list of strategies needed to achieve objectives. Personnel allocated percentages of time to these strategies, which were then summed to derive total percentage of time spent to achieve each objective. It was assumed in the IRC model, however, that student personnel administrators were accountable for all objectives of the student personnel division. In the productivity model formulated for this study, the IRC method has been adapted so that a single administrator allocates percentages of time to the MBO objectives of his department alone.

(3) Costs allocated in the NCHEMS model were all the resources of the institution, in contrast to the IRC model which utilized salary resources alone. In the model formulated here, all direct costs, as defined by NCHEMS, are allocated to objectives. These direct costs provide an appropriate representation of the monies available to a specific administrator in the administration of his department. They include:

- instructional/research/public service personnel compensation
- administrative/support personnel compensation
- other staff compensation
- supplies and services expenditures¹⁰

¹⁰Topping, "Cost Analysis Manual," p. 57.

(4) The outcome of cost allocation in the NCHEMS model was cost per program activity center; and in the IRC model it was cost per FTE for each student personnel objective. In the proposed productivity model, the outcome of cost allocation is cost to achieve financial aid objective per student, award, and dollars. In all three models cost allocation is performed for a one year period.

In sum, therefore, the method of cost allocation formulated for a productivity measure includes MBO objectives as the base unit or category, percentage of time allocated to objectives reported by a single administrator, direct costs utilized in achieving his set of objectives, and the annual cost per objective in terms of students served, awards granted, and dollars dispensed.

Derivation of Cost (Input) Component

In this sub-section, the procedures developed and described above to perform cost allocation are applied to the financial aids department of Lansing Community College.

The initial step was to identify the objectives for which the financial aids department would be held accountable during a one year period. These were readily available in the MBO documents adopted for the 1974-75 academic year. As noted above (see pages 84-85), there were eight objectives to be achieved.

To each of these eight objectives, the administrator was asked to allocate the percentage of his annual time devoted to achievement of the objective. (See Appendix E for

allocation form.) It was also necessary to allocate time of additional professional and support personnel to the financial aid objectives. This was accomplished in a two step process. First, the director of financial aids identified the percentage of each staff member's annual time spent on financial aids. Secondly, each of those specific percentages was allocated to the eight objectives according to the same proportions used by the director. The rationale for applying the director's percentages to all staff members rests upon the assumption that to accomplish objectives, the director will deploy all resources (including personnel) in a manner reflecting his own effort. In pilot tests using NCHEMS costing procedures, this method and rationale for allocating staff time has been substantiated.¹¹

The annual financial aids budget, presented in Table 1, was the basic source document for determining what amounts were eventually expended to achieve the eight objectives. From that budget, accounts pertaining specifically to financial aids, and expended at the discretion of the director were identified as costs to be allocated. Amount in these accounts totaled \$95,443.00. Accounts were arranged to correspond with the four direct cost categories delineated in the NCHEMS model.

In Table 2, the combination of categories, costs, and percentages are displayed, resulting in a distribution of

¹¹Topping, "Cost Analysis Manual."

TABLE 1

LANSING COMMUNITY COLLEGE FINANCIAL AIDS AND PLACEMENT BUDGET FOR 1974-75
(SECOND REVISION, 2 FEBRUARY 1975)

Cost Category	Account	Title of Account	Amount
Instructional/Research Public Service Personnel Compensation	. . . . .	. . . . .	. . . . .
Administrative/Personnel Compensation	01	Salaries-Administrators, Full Time	\$42,050.00
Support Personnel Compensation	06	Salaries-Support Personnel (Full Time)	23,245.00
	07	Salaries-Support Personnel (Part Time)	2,500.00
	13	Salaries-Student Aides (Regular)	5,100.00
	14	Salaries-Student Aides (Work/Study)	9,100.00
Supplies and Services	21	Office Supplies and Expenses	3,700.00
	47	Contracted Services	5,000.00
	76	Equipment	3,348.00
	81	Conferences and Travel	1,400.00
Subtotal			<u>\$95,443.00</u>

TABLE 1 - Continued

Cost Category	Account	Title of Account	Amount
Scholarships and Fellowships*	92	NDEA Matching Funds	\$37,000.00
	93	Tuition-Jackson Community College	3,500.00
	94	Board of Trustees Scholarships	72,800.00
	95	Student Loan Funds	15,000.00
	Subtotal		<u>\$128,300.00</u>
	Total Budget		<u>\$223,743.00</u>

SOURCE: "Financial Aid Budget, FY 1975" (Lansing, Mi.: Lansing Community College, Division of Student Personnel Services, adopted June 1974, revised 2 February 1975).

*This category is excluded from cost allocation in the productivity model, because dispersal of funds is fixed by the institution and/or federal government, i.e., monies not distributed at the discretion of the financial aids director. Probably for this same reason, the NCHEMS model excludes scholarships and fellowships in computing direct costs.

TABLE 2
ALLOCATION OF TOTAL DIRECT COSTS TO ACHIEVE FINANCIAL AIDS OBJECTIVES

Cost Category	(1) Amount Budgeted	(2) Amount Spent	(3) % of (2) Allocated to Objec- tives	(4) \$s Spent to Achieve Objectives (2) X (3)	(5) % of Time Allocated to Objec- tives	(6) Direct Costs Allocated to Objectives (4) X (5)
Instructional/Research Public Service Personnel Compensation						
Administrative/Personnel Compensation	\$42,050.00					
-director		\$20,200.00	100%	\$20,200.00	95%	\$19,190.00
-staff member		14,850.00	20%	2,970.00	95%	2,821.50
-staff member		6,500.00	10%	650.00	95%	617.50
Support Personnel Compensation						
-full time	\$23,245.00					
-secretary		\$ 7,414.00	100%	\$ 7,414.00	95%	\$ 7,043.30
-secretary		8,014.00	85%	6,811.00	95%	6,471.305
-overtime		400.00	100%	400.00	95%	380.00
-part time		2,500.00	100%	2,500.00	95%	2,375.00
-student aides (regular)		5,100.00	50%	2,550.00	95%	2,422.50
-student aides (work/study)		9,100.00	50%	4,550.00	95%	4,322.50
Supplies and Services						
-office supplies	\$ 3,700.00	3,700.00	60%	\$ 2,200.00	95%	\$ 2,109.00
-contracted services	5,000.00	5,000.00	100%	5,000.00	95%	4,750.00
-equipment	3,348.00	3,348.00	60%	2,008.80	95%	1,908.36
-conference, travel	1,400.00	1,400.00	40%	560.00	95%	532.00
Totals	\$95,443.00					\$54,942.965

total actual dollars (i.e., direct costs) expended to achieve financial aids objectives.

In Table 3, the total direct costs are allocated to the specific objectives of the financial aids department according to percentages of time spent to achieve them.

Having determined the cost utilized to achieve each and all objectives, it is possible to compute the cost (input) component of the productivity measure in relation to students served, awards granted, and dollars dispensed. This information is displayed in Table 4. Derivation of cost per objective in relation to each unit measure completes the cost input, or denominator portion of the productivity measure.

Quality Component (Output
Factor) of the Productivity Measure

In this section, the procedures developed to derive the quality, or output, component of the productivity measure are described and illustrated. A determination of quality connotes evaluation; the objectives for the financial aids department, as delineated by the MBO process, together with their attendant criteria, provide the basis for evaluation. Both quality and quantity of performance are, by nature of the criteria established, incorporated into the evaluation process. Also inherent in the criteria is the necessity to obtain a dual evaluation: from the supervisor of the financial aids director (as dictated by the philosophy of MBO), and from students (as dictated by the nature and content of the objectives themselves). The procedures developed to obtain both

TABLE 3
TOTAL DIRECT COSTS ALLOCATED TO SPECIFIC FINANCIAL AIDS OBJECTIVES

Cost Category and Direct Costs Allo- cated (Table 2)	Objectives*							
	1 (15%)	2 (20%)	3 (37%)	4 (5%)	5 (5%)	6 (5%)	8 (5%)	9 (3%)
Instructional/Research Public Service Personnel	.....	.....	.....	.....	.....	.....	.....	.....
Administrative/Personnel								
-director (\$19,190.00)	\$3,030.00	\$4,040.00	\$7,474.00	\$1,010.00	\$1,010.00	\$1,010.00	\$1,010.00	\$ 606.00
-staff member (\$617.00)	97.50	130.00	240.50	32.50	32.50	32.50	32.50	19.50
-staff member (\$2,821.50)	445.50	594.00	1,098.90	148.50	148.50	148.50	148.50	89.10
Support Personnel								
-full time								
-secretary (\$4,043.30)	\$1,112.10	\$1,482.80	\$2,743.18	\$ 370.70	\$ 370.70	\$ 370.70	\$ 370.70	\$ 222.42
-secretary (\$6,471.305)	1,021.785	1,362.38	2,520.403	340.595	340.595	340.595	340.595	204.357
-overtime (\$380.00)	60.00	80.00	148.00	20.00	20.00	20.00	20.00	12.00
-part time (\$2,375.00)	375.00	500.00	925.00	125.00	125.00	125.00	125.00	75.00
-student aides								
(regular) (\$2,422.50)	382.50	510.00	943.50	127.50	127.50	127.50	127.50	76.50
-student aides (work/ study) (\$4,322.50)	682.50	910.00	1,683.50	227.50	227.50	227.50	227.50	136.50
Supplies and Services								
-office supplies (\$2,109.)	333.00	\$ 444.00	\$ 821.40	\$ 110.00	\$ 110.00	\$ 110.00	\$ 110.00	\$ 66.60
-contracted services								
(\$4,750.00)	750.00	1,000.00	1,850.00	250.00	250.00	250.00	250.00	150.00
-equipment (\$1,908.36)	301.32	401.76	743.256	100.44	100.44	100.44	100.44	60.264
-conference, travel (\$532.)	84.00	112.00	207.20	28.00	28.00	28.00	28.00	16.80
TOTALS	\$8,675.205	\$11,566.94	\$21,398.839	\$2,891.735	\$2,891.735	\$2,891.735	\$2,891.735	\$1,735.041

*Percentages of time allocated to objectives total 95%, or the amount of annual time designated by the director to achieve financial aids objectives. Remaining 5% was spent on activity not related to financial aids.

TABLE 4
COST PER FINANCIAL AIDS OBJECTIVES FOR STUDENTS SERVED,
AWARDS GRANTED, AND DOLLARS DISPENSED

	Cost to Achieve Individual Objectives									Cost to Achieve All Objectives
	1	2	3	4	5	6	8	9		
Direct Cost to Achieve Objectives (Table 3)	\$8,675.205	\$11,566.940	\$21,398.839	\$2,891.735	\$2,891.735	\$2,891.735	\$2,891.735	\$1,735.041	\$	
Students Served (3900)*	\$2.224	\$2.965	\$5.486	\$.741	\$.741	\$.741	\$.741	\$.444	\$14.087	
Awards Granted (5707)*	\$1.520	\$2.026	\$3.749	\$.506	\$.506	\$.506	\$.506	\$.304	\$9.627	
Dollars Dispensed (Hundreds) (\$13,317.04)*	\$.449	\$.598	\$1.107	\$.149	\$.149	\$.149	\$.149	\$.089	\$2.844	

*Although some student, award, and dollar totals originate in the four accounts excluded from the computation of direct costs, i.e., Scholarships and Fellowships, they are included here to derive cost per objective because all resources of the department are used to administer them regardless of the origin of aid or type of award made. See Appendix C for "Lansing Community College Distribution of Financial Aid Assistance."

supervisor and student evaluation of financial aids performance are described in the following.

Supervisor Evaluation of Financial Aids Achievement of Objectives

To obtain the supervisor's evaluation of achievement of financial aids objectives, an instrument and rating scale were devised.¹² The instrument, consisting of statements to be rated on a scale of A - F, was based upon the implementation activities present in the college MBO documents. Fulfillment of the criterion accompanying each activity indicated whether the activity had been performed, hence whether the objective had been achieved. Each criterion, therefore, became a statement on the evaluation form completed by the Dean of Students. Ratings of A - E were allotted point values of 1 - 5 respectively; a rating of F indicated there was no evidence available to judge performance.

Accompanying the first objective, for example, were nine implementation activities and their nine corresponding criteria. The Dean of Students gave two responses of C (3 points X 2 = 6), six responses of D (4 points X 6 = 24), and one response of E (5 points X 1 = 5). Total points earned by the director of financial aids on this objective, therefore, was 35 (6+24+5 = 35). Dividing this point total by the number of criteria (9) yielded a value of 3.888, or the rating for the first objective. In this same manner,

¹²See Appendix F for rating scale and evaluation form used by supervisor.

ratings for each of the remaining seven objectives were obtained. To obtain a composite rating, the total points acquired on all eight objectives (156) was divided by the number of criterion statements (39), yielding an overall rating of 4.000. All ratings for financial aids objectives achievement, as evaluated by the Dean of Students, are displayed in Table 5.

TABLE 5
SUPERVISOR EVALUATION: ACHIVEMENT OF
FINANCIAL AIDS OBJECTIVES

Objective	Rating
1	3.888
2	4.166
3	3.625
4	3.333
5	4.333
6	5.000
8	3.500
9	4.666
composite rating	4.000

Student Evaluation of Financial Aids Achievement of Objectives

To obtain an evaluation of financial aids services by students, it was necessary to construct an evaluation instrument to be administered to a sample of financial aids recipients. A "Financial Aids Questionnaire" consisting of twenty items was devised. By utilizing each criterion throughout the MBO documents which pertained to direct interaction between

the financial aids office and students, eighteen items were derived. Evaluation obtained for each item, therefore, could be directly related to the objective from which it originated. A rating scale identical to that used on the supervisor evaluation was used.¹³ One of the remaining two items on the questionnaire pertained to type of aid received by the student; the other item was open-ended and solicited suggestions and comments regarding financial aids services.

To select a sample of financial aids recipients, a print-out listing all students currently receiving aid was obtained from the Data Processing department at Lansing Community College. In the academic term during which the questionnaire was administered, the print-out listed 2,749 students. Flipping a coin determined that the second student become the first member of the sample. From that point, every second student was selected except those for whom no address was given. In this manner, a sample of 941 students (or 33.2% of financial aid recipients) was obtained.

Following a pilot study of twelve respondents which was conducted on May 27-28, a mailing on 30 May 1975 to the sample of 941 students resulted in a return of 309 questionnaires by 1 July 1975. No follow-up was attempted because the number of responses was large enough to yield a significant result, and because a follow-up would have corresponded with termination of the academic year. The return of 309

¹³See Appendix G for cover letter, rating scale, and "Financial Aids Questionnaire."

questionnaires represented 33.8% of the sample and 11.2% of the total population of financial aid recipients.

Although students may receive four types of financial aid, (scholarship, loan, grant, employment), no effort was made to stratify the sample since services rendered by the financial aids office are uniform for each type of aid. Returns in two categories did approximate the actual distribution among type of aid, however, thus substantiating the belief that responses realistically represented the total population. Percentages of students receiving each type of aid and the respective return are indicated in Table 6.

TABLE 6
DISTRIBUTION OF TYPE OF AWARD TO
FINANCIAL AID RECIPIENTS

Type of Aid	Actual % of Recipients	% Distribution of Returns
Scholarship	6.9%	15.8%
Loan	33.1%	33.0%
Grant	47.0%	37.6%
Employment	12.8%	13.5%

In order to compute student evaluations, it was first necessary to tabulate responses to each of the eighteen items on the questionnaire. Responses of A - E for each item were allotted 1 - 5 points respectively; a response of F indicated there was no evidence to evaluate performance. Point values,

together with number of usable responses for each item, are displayed in Table 7.

TABLE 7

STUDENT RESPONSES TO FINANCIAL AIDS QUESTIONNAIRE

Item	Total Points (A=1, B=2, ... , E=5)	Number of Respondents (309 minus F responses and unanswered or un- usable responses)*
2	622	217
3	561	169
4	895	258
5	938	272
6	871	280
7	789	258
8	679	228
9	703	223
10	805	244
11	768	240
12	554	207
13	722	255
14	824	236
15	811	237
16	870	262
17	941	285
18	525	186
19	845	262
	13,723	4,319

*Number of respondents is substantially lower in a few cases, e.g., item numbers 3 and 18, because the nature of the question encouraged a response of F. The number of unanswered or unusable responses on any item never exceeded a total of 20.

Because the eighteen items correspond to criteria for the financial aids objectives which are student-related, they were grouped to obtain the student evaluation for each of the four student-related objectives. Results of this procedure are displayed in Table 8.

Composite Evaluation of Financial Aids Services: Quality
(Output) Component

Supervisor and student evaluation of the achievement of financial aids objectives were combined to form the composite evaluation which is the output component of the productivity model. For four of the eight objectives, the only evaluation derived was that of the supervisor. Evaluation of the remaining objectives is the average of both supervisor and student ratings. It is recognized that fifty percent of the composite for four objectives, and one hundred percent of the composite for four objectives is obtained from a single person. This distribution exists due to the nature of performance being evaluated. For four objectives, where financial aid activity pertained to internal operation alone, the supervisor is the sole possible evaluator. In addition, the system of MBO, utilized by the college to establish objectives, dictates that the supervisor rate each manager's performance. The four remaining objectives were accomplished by activity directly pertaining to students. Their rating of performance, therefore, is averaged into that obtained from the supervisor. The final output component necessary for the productivity measure of financial aids objectives is displayed in Table 9.

TABLE 8
STUDENT EVALUATION: ACHIEVEMENT OF STUDENT-RELATED
FINANCIAL AIDS OBEJCTIVES

Objective	Related Questionnaire Items		Rating
	Item Number	Total Points (Table 7)	Total Respondents (Table 7)
1	10	not student-related	. . .
2	10	805	244
	11*	768	240
	13	722	255
	14	824	236
	16*	870	262
	17	941	285
	19	<u>845</u>	<u>262</u>
		5,775	1,784
			3.237
3	2	622	217
	3	561	169
	4	895	258
	5	938	272
	6	871	280
	7	789	258
	8	679	228
	9	703	223
	12	554	207
	15	<u>811</u>	<u>237</u>
		7,423	2,349
			3.160
4		not student-related	. . .
5		not student-related	. . .
6	11*	768	240
	16*	<u>870</u>	<u>262</u>
		1,638	502
			3.262
8	18	525	186
			2.822
9		not student-related	. . .

*Items 11 and 16 are used to evaluate objectives 2 and 6.

TABLE 9

COMPOSITE EVALUATION OF FINANCIAL AIDS SERVICES

Objective	Supervisor Evaluation (Table 5)	Student Evaluation (Table 8)	Composite Evaluation
1	3.888	. . .	3.888
2	4.166	3.237	3.701
3	3.625	3.160	3.392
4	3.333	. . .	3.333
5	4.333	. . .	4.333
6	5.000	3.262	4.131
8	3.500	2.822	3.161
9	4.666	. . .	4.666
all objectives	4.000	3.177	3.588

Productivity Measure of Financial Aids Services

In the preceding sections, both the cost input and quality output components of the productivity measure were derived. When compared in accordance with the ratio defining productivity measurement (output divided by input = productivity measure), the following measures of financial aid productivity in achieving departmental objectives during 1974-75 can be stated.¹⁴

Productivity measure per: students served = .254

Productivity measure per: awards granted = .372

Productivity measure per: dollars dispensed (100s) = 1.261

Because both cost and quality components were also derived according to specific objectives, it is possible to compute the productivity measure for each objective. All productivity

¹⁴Three measures are from final line of Table 10.

TABLE 10
PRODUCTIVITY MEASURES OF FINANCIAL AIDS DEPARTMENT FOR 1974-75 ACADEMIC YEAR

Objective		Students Served		Awards Granted		Dollars Dispersed	
Number	(1) Quality Output (Table 9)	(2) Cost Input (Table 4)	(3) Produc- tivity Measure (1)÷(2)	(4) Cost Input (Table 4)	(5) Produc- tivity Measure (1)÷(4)	(6) Cost Input (Table 4)	(7) Produc- tivity Measure (1)÷(6)
1	3.888	\$ 2.224	1.748	\$1.520	2.557	\$.449	8.659
2	3.701	2.965	1.248	2.026	1.826	.598	6.188
3	3.392	5.486	.618	3.749	.904	1.107	3.064
4	3.333	.741	4.497	.506	6.586	.149	22.369
5	4.333	.741	5.847	.506	8.563	.149	29.080
6	4.131	.741	5.574	.506	8.164	.149	27.724
8	3.161	.741	4.265	.506	6.247	.149	21.214
9	4.666	.444	10.509	.304	15.348	.089	52.426
Composite	3.588	\$14.087	.254	\$9.627	.372	\$2.844	1.261

measures are displayed in Table 10. Computation of the productivity measures for a one year period completes the procedures devised for formulating a productivity model appropriate to a specific function of student personnel services in higher education.

Summary of Methodology for Derivation and Illustration of Productivity Measures

In this chapter the productivity measures for achieving financial aids objectives were derived and illustrated with actual data from Lansing Community College during the 1974-75 academic year. The procedures corresponded to the steps toward implementation indicated by Wilson and Finz (see page 11 above). The first step was to delineate the goals and objectives which underlie both components of the productivity measure. A system of MBO provided the appropriate objectives.

The second step was to derive the cost (input) component which is the denominator in the ratio defining productivity measure. Two models for allocating costs to objectives were examined and partially adapted in formulating a method appropriate to the productivity concept. The outcome of this procedure, i.e., the cost to achieve each individual and the composite number of objectives, was displayed in Table 4 according to three unit measures: number of students served, awards granted, and dollars dispensed (in hundreds).

The third step was to derive the quality (output) component which is the numerator in the productivity ratio. An evaluation by both supervisor and students was undertaken of

how well the financial aids department achieved the objectives specified by the MBO method. Procedures for conducting the evaluations and methods used to combine them into a composite evaluation were described. The outcome, displayed in Table 8, comprised the quality (output) component of the productivity measure.

The final step, in which the productivity measure was computed for financial aids objectives in relation to each of the three unit measures, was undertaken and illustrated in the fourth section of the chapter. The result, obtained by dividing quality output by cost input for each objective, is a numerical value representing the productivity of financial aids for one academic year. The productivity measures were displayed in Table 10. Computation of these measures portrays one segment within a time series, thus illustrating the potential formulation of a longitudinal productivity model for any function of student personnel services in higher education.

CHAPTER IV

SUMMARY AND IMPLICATIONS

Summary of Study

In this study, there is a derivation of productivity measures for a specific function of student personnel services through formulation of both cost input and quality output components for financial aids services. There are three main chapters.

In Chapter I the conceptual basis of this study was discussed. For many and diverse reasons, demands for accountability come from all constituents and financial benefactors of higher education. One response to the call for accountability is an increased emphasis upon evaluation. While not synonymous with accountability, evaluation in some form, particularly with regard to effectiveness and efficiency, is antecedent to it. Productivity is a concept which incorporates all these notions. Specifically, inputs and outputs of a system are compared to demonstrate whether that system is tending toward greater or lesser efficiency. Input is considered to be the resources used in producing the outcome, and is expressed in cost terms. Output is indicated by a measure of what was achieved. When derived through evaluation, the output expresses quality of achievement. Hence, an administrator using productivity measures necessarily demonstrates

the application of resources to achieve specific ends (i.e., efficiency), at a measurable level of quality (i.e., effectiveness). He is not only guided in planning, decision-making, and administration, but is thereby found accountable.

Little has been done yet, however, in the application of productivity measures to higher education. Limitations arising from transfer of productivity theory to education, and from lack of satisfactory measures for input and output, hinder the use of productivity models to respond to the need for greater accountability. This study was undertaken in order to derive a method whereby productivity might be applied to higher education. Because scant efforts have been made to measure the outcome of service functions within colleges and universities, a function of student personnel services (i.e., financial aids) was chosen to illustrate the derivation of productivity measures.

In Chapter II of this study, selected literature was reviewed regarding each concept relevant to derivation of productivity measures. Six sections were included. The first, second, and third sections were concerned with accountability, productivity, and evaluation of student personnel services respectively. In the fourth section, literature relevant to goal-setting, derivation of objectives (particularly through use of management-by-objectives), and outcome measures was reviewed. Subject of the fifth section was cost analysis, and in the last section, literature was selected to describe the history and scope of the financial aids func-

tion of student personnel services.

Chapter III contained a description and illustration of the procedures devised to formulate productivity measures for financial aids. Three processes were undertaken. First, the goals and objectives which serve as the basis for both cost and quality components were identified. Second, procedures were carried out to obtain the cost (input) component. Third, the quality (output) component was constructed, including evaluation of achieving financial aids objectives. The input and output components were then compared, using the arithmetic ratio which defines productivity, to express a productivity measure for the achievement of financial aids objectives. These measures were expressed in terms of three unit measures: students served, awards granted, and dollars dispensed in a single academic year.

Chapter IV of the study includes a summary, conclusion and findings, discussion of productivity use, implications, and recommendations for future research.

Conclusion and Findings

Due to the unconventional nature of this study, in which no empirical investigation nor hypothesis-testing was attempted, there can be no discrete set of conclusions stated. Rather, one overall conclusion is presented: it has been demonstrated that development of a single-factor productivity measure, relating output to one type of input (costs) can be derived for a function of student personnel services. No attempt was made, nor is yet available elsewhere, to expand

the measures to total-factor productivity.

In practice, no satisfactory method has been found to account separately for the contribution of each resource input which, in combination with other inputs, produces joint products. Existing techniques in the field of economic analysis require so many measurements to be taken under such closely controlled production conditions that only crude applications have been attempted in higher education.¹

Before concluding that derivation of productivity measures was possible, it was necessary to implement several procedures. These were presented and illustrated with actual data from a comprehensive urban community college for one academic year. Four items comprise a summation of the procedures.

1. Identification of objectives and their attendant criteria upon which to base cost allocation and evaluation of achievement. (See pages 83-85 above.)
2. Derivation of cost (input) component: the denominator portion of the productivity ratio. (See:
 - Table 1 - Lansing Community College Financial Aids and Placement Budget for 1974-75, Second Revision 2 February 1975.
 - Table 2 - Allocation of Total Direct Costs to Achieve Financial Aids Objectives
 - Table 3 - Total Direct Costs Allocated to Specific Financial Aids Objectives
 - Table 4 - Cost Per Financial Aids Objectives for Students Served, Awards Granted, and Dollars Dispensed)
3. Derivation of quality (output) component: the numerator portion of the productivity ratio. (See:

¹Paul L. Dressel, Institutional Research in the University, p. 226.

Table 9 - Composite Evaluation of Financial Aids Services)

4. Computation of productivity measures for each and for the composite objectives of financial aids services. (See:

Table 10 - Productivity Measures of Financial Aids Department for 1974-75 Academic Year)

Discussion of Productivity Use for Student Personnel Services in Higher Education

It must be remembered that a productivity measure is basically a descriptive device, meant to be utilized in a time series. In this study, measures were derived for one segment of a potential series, i.e., one academic year. Repeated applications to the same student personnel function over successive years, therefore, should indicate increased or decreased productivity for the department being studied. At that point, the productivity measures become indicators of the efficiency in which output is produced by the resources utilized.

Greater efficiency (i.e., higher productivity) is achieved when either of three conditions prevails: cost input is held constant while output improves, cost input decreases while output remains constant, or increased cost input is accompanied by a greater rate of increased output. Although the measures computed in this study pertain to a single year, these relationships are already evident in comparison among objectives in Table 10. One example exists within productivity measures for students served in a single year. When quality output

increases (from 3.333 on Objective 4 to 4.333 on Objective 5), and cost remains constant (\$.741 to achieve both Objectives 4 and 5), the productivity increases from 4.497 to 5.847.

While there are difficulties and limitations which inhibit application of productivity to the entire spectrum of higher education,² there is reason to consider productivity a viable and immediately applicable approach to a segment of an institution such as student personnel services. First, the measures of input and output which may be inconclusive and/or inaccurate on a large scale can be realistically derived for a single department. Second, the objectives which serve as the basis for comparing input to output can be more readily identified on a departmental level. Third, monetary resources expended by a single department administrator can be isolated and analyzed more easily than those monies appropriate to an entire institution. Fourth, the procedures developed in this study can be applied to any function of student personnel services similar in operation to financial aids as long as objectives exist or are developed.

When employed as trend analysis, or time series, productivity measures for any student personnel service contribute toward greater accountability in four ways. They portray past activity and indicate directions of future implementation of services. They indicate aspects of the department which tend toward greater or lesser efficiency, hence identifying

²See pages 12-16 above for discussion of the use of productivity measurement for higher education purposes.

activities needing analysis and/or adjustment. They reveal direction and progress in a general sense without having to describe the exact nature of the activity performed or service offered. And finally, they are useful in model building to represent an entire component of student personnel services. If productivity is used in any or all of these four ways, it will significantly aid in the provision of increased accountability.

Implications for Application and Recommendations
for Future Research

Several recommendations, extensions, and applications of the procedures devised in this study are possible. First to be discussed are adjustments within the present procedures.

In regard to the cost input component, the means of allocating annual time to objectives of the department should be extended and refined. In this study, the time allocation was a subjective exercise on the part of the administrator concerned. Before repeated productivity measures are computed, more stringent methods of time allocation, perhaps by means of time study, historical analysis, and/or supervisory verification, should be explored and adopted.

Two major improvements are needed with regard to the quality or output components. The first has to do with expansion of the population which evaluated achievement of objectives. If the MBO method for identifying objectives is retained, self-evaluation should be incorporated into the composite evaluation. Another expansion concerns the student

sample of evaluators. Applicants to the service in question, in addition to just those who eventually receive financial aid, should also evaluate services extended to them. A comparison between applicants and recipients may yield significant differences in evaluation outcomes. Another population which should evaluate performance of the department in question includes those persons throughout the college who have knowledge or experience with the department. Finally, the fund suppliers for the department being studied must be considered legitimate evaluators.

The second major improvement has to do with the evaluation instrument itself. It is admittedly crude and should be refined and validated before further attempts at evaluation are undertaken.

With regard to the application and derivation of productivity measures beyond the scope of this study, seven avenues of research are immediately evident. First, the issue of quantity and quality of performance should be treated more fully. In this study an attempt was made to incorporate both dimensions into the evaluation component. It may be more appropriate to treat them separately and to derive productivity measures for each. Admittedly, criteria are more easily established for quantitative activity; this does not preclude, however, the possibility of developing separate criteria for quality. A comparison of productivity measures between these two dimensions within the same department might supply an additional and revealing indication of performance

not presently available in the procedures developed for this study.

Second, the procedures devised in this study should be applied to other functions of student personnel services to evaluate their utility as an overall means of examining efficiency.

A third extension of the work undertaken here is to actually compute productivity measures in a time series, with attention to the potential causes of increased or decreased productivity over time. Identification of potential causes might well lead to further research. Computation of productivity measures in a time series would also be a necessary and substantial contribution toward model building.

A fourth area of investigation concerns the objectives which served as the basis for both components of the productivity model. In this study, MBO was the most appropriate and available method of isolating departmental objectives. In a different time and institution, other methods might be appropriate, or implementation of a technique such as the Delphi method to derive consensus about objectives could be applied.

Similarly, a fifth area of research concerns the system outcomes which are evaluated to comprise an output component. Here, again, the MBO documents supplied an identification of outcomes. A variety of outcome identification methods might be used in other settings.

A sixth research problem suggested by this study is use

of productivity measures for comparisons across departments. Within present theory, the nature of productivity is defined as a trend indicator, i.e., meant to be applied in longitudinal fashion. Comparisons are meant to occur within the same measures. If a commonality across departments could be expressed by the designation of some base figure, deviations from that base might provide the means of cross-departmental comparison. This base, however, would have to be determined by substantial mathematical and philosophical justification.

A final research problem to be resolved in further use of the procedures devised in this study concerns cost allocation. If productivity measures were to be computed in a time series, mathematical adjustments would have to be devised and applied to account for the effects of inflation and institutionally-dictated salary increments. Without this adjustment, the resulting productivity measures would be unrealistically decreased.

Although it seems that a variety of conceptual issues and research problems attend the application of productivity to higher education and the building of a fully developed model, the procedures developed and illustrated within this study provide a realistic starting point. Essentially, any student personnel administrator who wishes to investigate the productivity within his department has the means here to do so. He will need to perform three operations: first, specify his objectives in measurable terms; second, allocate his budget to these same objectives to obtain cost input; and, third,

obtain an appropriate evaluation of how well (and/or to what extent) his objectives have been achieved. By simple division, he can compute productivity measures. As with all innovations and adjustments to present practice, the first implementation of productivity will prove time-consuming and complex. He should find the process justified, however, not only because it will become more efficient and automatic with repeated implementation, but because he will have developed a multi-dimensional method of response mandated by the age of accountability in higher education.

APPENDICES

A. REQUEST AND PERMISSION TO USE BUDGET INFORMATION AT LANSING COMMUNITY COLLEGE

TO: Dean William G. Schaar
FROM: Martha R. Smydra
SUBJECT: DOCTORAL DISSERTATION
DATE: November 19, 1974

The attached document is a proposal for a doctoral dissertation to be submitted to Michigan State University. Its subject is evaluation of student personnel services, and it has recently been approved by my doctoral committee which is chaired by Dr. James Nelson.

In order to develop my topic, it will be necessary to utilize data concerning costs and evaluative instruments of a specific student personnel service. Hopefully the dissertation will emerge as the initial procedure for construction of a productivity model which will relate cost input to quality output. I believe it will be a useful tool for a student personnel administrator who wishes to monitor resources and/or plan deployment of resources.

I would like to request access to the necessary data from the records and daily operation at Lansing Community College. It may not be necessary to identify the institution in my thesis, and the mention of "counseling" in the proposal is merely for illustrative purposes. I will, of course, adhere to whatever policies and guidelines the College wishes to establish regarding utilization and publication of data.

I believe the planned dissertation will not only contribute to the literature of evaluation, but can benefit the division of Student Personnel Services at Lansing Community College in the immediate future.



Martha R. Smydra

MRS:sb

Attachment

TO: President Philip J. Gannon

FROM: William Schaar, Dean, Student Personnel Services

SUBJECT: ADMINISTRATIVE CONCURRENCE/DISSERTATION REQUEST

DATE: November 22, 1974

*Looks like a good idea
lets go ahead
Phil.*

Attached you will find a copy of a memo from Mrs. Martha Smydra to me and a copy of her dissertation proposal. Mrs. Smydra has been working with my office as a Part-time Administrative Assistant for the past calendar year.

She has been working with Jim Nelson, and her proposal has been approved. I would like to have your concurrence in providing Marty budget information for the SPS Division as a basis for her model building in the area of a cost indexing of Student Personnel Services.

What will the College gain?

- a. A working model for cost indexing Student Personnel Services with a quality factor included.
- b. A beginning point on which we can have reasonable background for budget development.
- c. One very pleased Part-time Administrative Assistant to the Dean of Student Personnel Services.

What will Mrs. Smydra gain?

- a. Information for a doctoral dissertation.

I would be working with Mrs. Smydra. Your consideration would be appreciated such that work might begin. Would you return the attached material after you have read it for my files. Thank you.

William G. Schaar Jr.
William G. Schaar, Jr.

WGS:sb

Attachment (1)

B. DISSERTATIONS PERTAINING TO EVALUATION OF STUDENT PERSONNEL SERVICES (CHRONOLOGICAL LISTING)

Category 1: Perceptions and Reactions of Administrators, Faculty, Students, and Student Personnel Workers Regarding Effectiveness of Student Personnel Services

Daughtrey, John Patrick. "An Analysis of Student and Faculty Reaction to Student Personnel Services at the University of Florida" (University of Florida, 1953).

Goodman, Michael. "An Evaluative Survey of the Student Personnel Program at the New Jersey State Teachers College at Montclair" (New York University, 1957).

Finley, Thomas McClure. "The Scope and Effectiveness of the Student Personnel Services of the Junior Colleges of Pennsylvania" (University of Pittsburgh, 1958).

Shigley, E. Harold. "An Evaluation of Student Personnel Services at Marion College" (Indiana University, 1958).

Fitzgerald, Laurine Elisabeth. "A Study of Faculty Perceptions of Student Personnel Services" (Michigan State University, 1959).

Harry, Ormsby L.. "A Study of the Student Personnel Services at Michigan College of Mining and Technology" (Michigan State University, 1960).

Gutsch, Kenneth U.. "A Survey of Student Personnel Services in Selected Florida Community Junior Colleges and the Attitudes of Presidents, Student Personnel Officers, Faculty Members and Students Toward These Services" (Florida State University, 1961).

Aubry, Alvin Joseph. "A Comparative Study of Questionnaire and Interview Responses in an Evaluation of the Student Personnel Services of Xavier University" (Indiana University, 1963).

Cox, Blanche. "Recommendations Relative to the Student Personnel Program of Dade County Junior College" (University of Miami, 1963).

Zimmerman, Elwyn Ernest. "Student Perceptions of Student Personnel Services at Michigan State University, 1963).

Tamte, James Arthur. "How Faculty, Student Personnel Workers, and Students Perceive Student Personnel Services at the University of Denver" (University of Denver, 1964).

Bailey, Dallas Barnett, Jr.. "An Evaluation of Student Personnel Services in a College as Perceived by the Formal Organizational Units of a College Community" (Kent State University, 1966).

Rankin, Gary Edmond. "Graduating Seniors' Perceptions of Student Personnel Services at Colorado State College" (University of Northern Colorado, 1966).

Yatros, John Edward. "Construction and Application of Two Inventories for Use in College Student Personnel Work: I. Student Personnel Services Needs Inventory; II. Faculty Preference Inventory for Student Personnel Functions" (Indiana University, 1966).

Bray, Gerald Winslow. "An Analysis of Student Personnel Functions and Desired Level of Counseling Education in Community Junior Colleges as Perceived by Selected Educators" (Purdue University, 1967).

Langston, Timothy Louis. "An Evaluation of the Student Personnel Services at Kent State College" (Indiana University, 1967).

Ross, Margaret Ann. "Administration, Faculty, and Student Personnel Workers' Evaluation of Student Personnel Functions" (Ohio University, 1967).

Harris, Douglas Clay. "Student Personnel Services at Indiana University: An Evaluation" (Indiana University, 1968).

Johnson, Walter Michael. "Faculty Perceptions of Student Personnel Services" (University of Northern Colorado, 1968).

Johnson, Thomas Bradford. "A Study of Student Personnel Services in Selected Illinois Four-Year Colleges and Junior Colleges" (Northwestern University, 1968).

Todd, Will Roger. "A Study of Student Perceptions of the Effectiveness of Student Personnel Services at a Large State University and a Small State College" (Oklahoma State University, 1968).

Wisgoski, Alfred E.. "Attitudes of Community College Presidents, Chief Student Personnel Officers, and Faculty Toward the Student Personnel Point-of-View in Selected Illinois Community Junior Colleges, 1967-68" (Northern Illinois University, 1968).

Rhodes, Henry Kenneth. "A Study of Student Evaluation of Student Personnel Services and Campus Environment in Selected Junior Colleges" (Texas Technical University, 1969).

Wheeler, Helen Irene. "The Attitude of Selected Community

College Faculties Toward Student Personnel Services"
(Washington State University, 1969).

Bates, Dennis Logan. "Urban Challenge and University Responses: An Investigation of Five Student Personnel Functions at Two Ohio Public Universities" (University of Toledo, 1970).

Maples, Wallace Rogers. "Functions of Chief Student Personnel Administrators of Public Junior Colleges" (Indiana University, 1970).

Emerson, William Preston. "Faculty, Student, and Student Personnel Worker Perceptions of Selected Student Personnel Services in the Community Colleges of North Carolina" (Michigan State University, 1971).

Kaplan, Charlotte Siegel. "Graduate Students' Evaluation of Student Personnel Services Available to Graduate Students at the University of Mississippi" (University of Mississippi, 1971).

Stahl, Dick Allen. "Freshmen Perceptions of Student Personnel Services at the University of Wyoming for 1970-71" (University of Wyoming, 1971).

Galligan, Carl J.. "A Study of the Perception of Student Personnel Programs by the Professional Student Personnel Workers in Maryland Public Junior and Community Colleges" (Catholic University of America, 1972).

Herr, James Robert. "Perceived Quality of Student Personnel Services in Two Pennsylvania Community Colleges Differing in Student to Personnel Worker Ratio" (University of Wyoming, 1972).

Jones, Jean Kinard. "Students' Perceptions of Student Personnel Services at the University of Mississippi" (University of Mississippi, 1972).

Mortvedt, Donald Forbes. "Inventoried Perceptions of Key Administrative Officers in Illinois Community Colleges Concerning Student Personnel Services" (University of Illinois at Urbana, 1972).

Shuman, Irven Gayle. "Resident Faculty, Faculty Administrators, and Student Personnel Perceptions of a Program of Student Personnel Services" (Arizona State University, 1972).

Terenzini, Patrick Thomas. "A Comparison of the Purposes of Student Personnel Programs as Viewed by College and University Presidents and Chief Student Personnel Officers" (Syracuse University, 1972).

Vickers, Lee Arthur. "Student Perceptions of Student Personnel Services at Lewis-Clark State College, 1972" (University of Wyoming, 1972).

Vande Guchte, Peter. "A Study of Relationships Between the Use of Management-by-Objectives and Perceived Effectiveness in Selected Community Junior College Student Personnel Units" (Western Michigan University, 1973).

Cowins, Bernard. "Perceptions of Student Personnel Services at the University of North Florida" (University of Oklahoma, 1974).

Category 2: Examinations of Purposes, Organization and Administration of Student Personnel Services

Paul, George Johnson. "Organization of Student Personnel Services in a Community College" (Stanford University, 1954).

Scott, William Lee. "A Study of Student Personnel Services in Small Liberal Arts Colleges" (Michigan State University, 1959).

Brantley, Edward James. "A Study of the Student Personnel Program at Clark College" (University of Colorado, 1960).

Yoder, Marlen Dean. "The Development of Guidelines for Student Personnel Services in the Two-Year Community College" (Oregon State University, 1965).

Goud, Nelson Henry. "A Social Systems Analysis of Junior College Student Personnel Programs" (Michigan State University, 1967).

Swanson, Laura Joan. "A Study of Student Personnel Programs in the Two-Year Colleges of the New England and the Middle Atlantic States" (George Washington University, 1967).

Gillies, Richard Ebenezer. "A Method for Surveying Student Personnel Services Programs in Two California Junior Colleges" (University of California, Las Angeles, 1968).

Anderson, Robert Alexander, Jr.. "Description of Community Junior College Chief Student Personnel Administrators Based on Regional and Institutional Comparison" (University of Utah, 1969).

Beasley, Thad Gordon. "A Comparative Study of the Functions of Student Personnel Services in the State Supported Colleges and Universities of Arkansas" (University of Arkansas, 1969).

Herren, Ralph Leonard. "A Survey of the Personnel Services at the Public Junior Colleges of the Council of North Central Junior Colleges, 1968-69" (University of Tulsa, 1969).

- Milton, Furman Demetrius, Sr.. "An Appraisal of Student Personnel Staff Resources and Current Student Personnel Functions in Texas Public Community Colleges" (East Texas State University, 1969).
- Mitchell, James Gerald. "An Appraisal of Evening Community College Student Personnel Services in Western United States" (Oregon State University, 1969).
- Arkovich, Marvin Larry. "A Critical Analysis of the Organization and Administration of Public Junior College Student Personnel Services" (University of Texas at Austin, 1970).
- Bucci, Frank Anthony. "A Differential Evaluation of Personnel Practices Affecting Student Personnel Administrators in Public Four Year Colleges" (University of Connecticut, 1970).
- Chevalia, Don Edwin. "A Survey of Selected Student Personnel Services Offered in Two-Year Public Institutions in the Southeastern Region of the United States" (Memphis State University, 1970).
- Pennington, Raymond Benjamin. "The Status of Student Personnel Services in the Thirteen Community Colleges of North Carolina, 1968-1969" (Duke University, 1970).
- Reilly, William John. "Perceptions of the Origin, Development, and Future of Student Personnel Services in the Community Colleges of the State University of New York" (St. John's University, 1970).
- DeCabooter, Arthur W.. "Chief Student Personnel Officers in Community Junior Colleges" (Indiana University, 1971).
- Garrett, Philip Leroy. "The Development of a Model for a Student Personnel Services Program in a State College" (Catholic University of America, 1971).
- Holland, Bobby Tyson. "Student Personnel Administrative Services Provided by State Agencies for Community Colleges" (Florida State University, 1971).
- Kauffman, James Fredrick. "Contrasting Views of Purposes of Student Personnel Work as Perceived by Educators and Practitioners" (University of Denver, 1971).
- Pierce, Robin L.. "A Study of Chief Student Personnel Administrators in Public Community Colleges Accredited by the Southern Association of Colleges and Schools" (Memphis State University, 1971).
- Parr, John Dee. "A Study of the Trends in Student Personnel Functions in Selected Colleges and Universities in the North Carolina Association - 1960 to Present" (University of South Dakota, 1974).

Category 3: Efforts to Determine Criteria for Evaluation and Evaluation Methods for Student Personnel Services

- Rackham, Eric Newton. "The Determination of Criteria for the Evaluation of Student Personnel Services in Institutions of Higher Learning" (University of Michigan, 1951).
- Hage, Robert Silvers. "A Revision of the Rackham Student Personnel Services Inventory" (University of Iowa, 1957).
- Beckers, Wilmer Henry. "An Evaluation of the Student Personnel Program at the Auburn University School of Education" (Auburn University, 1961).
- Morris, Robert Burton. "Development of Criteria for Evaluating Student Personnel Programs" (Pennsylvania State University, 1964).
- Robinson, Seldon C.. "Student Evaluation of the Adequacy of Student Personnel Services in Selected Institutions of Higher Education in Texas" (Texas Technical University, 1966).
- Badger, Herbert L., Jr.. "Evaluating Student Personnel Services" (University of Southern Mississippi, 1967).
- Herrington, William B.. "A Proposed Student Personnel Program for Navarro Junior College" (Baylor University, 1967).
- Devlin, Joseph Stuart, Jr.. "The Evaluation of Programs of Student Personnel Services in Higher Education - A Synthesis" (Florida State University, 1968).
- Hargett, Earl Forest. "Informational Needs in Public Community Colleges: Development and Application of Evaluative Criteria" (University of Tennessee, 1969).
- Hight, Mildred Emma. "Evaluation of the Effectiveness of Student Personnel Services of Small Junior Colleges in California" (University of Southern California, 1970).
- Morris, William Robert. "Identification and Development of Procedures and Criteria for Self-Analysis by Community Colleges" (Oregon State University, 1970).
- Kraeger, James Emerson. "A Comparative Study of Student Personnel Services in Five Private Institutions of Higher Learning in Metropolitan New York" (Fordham University, 1972).
- Paulson, Donald Leonard, Jr.. "An Accountability Audit of Two University Student Personnel Services: Student Activities and Counseling" (University of Iowa, 1972).

Flint, Lowell Truman. "A Methodology for Deriving Behavioral Objectives for Student Personnel Programs" (Duke University, 1973).

Snowbarger, Gordon Lee. "Community College Evaluation Practices" (Colorado State University, 1974).

Category 4: Surveys of Scope and Quantity of Student Personnel Services

Gray, Clarence Jones. "An Evaluative Study of the Student Personnel Program for Men at the University of Richmond" (University of Virginia, 1962).

Johnson, James Jay. "The Perceived Function of Personnel Services in the Junior Colleges of Illinois" (Northwestern University, 1966).

Karns, Lee Thomas. "The Status of Student Personnel Services in the Seven State and Five Municipal Junior Colleges of Oklahoma" (University of Oklahoma, 1966).

Bradley, Harry Leonard. "An Analysis of Student Personnel Programs in the Community and State Colleges of Washington" (Washington State University, 1967).

C. LANSING COMMUNITY COLLEGE DISTRIBUTION OF FINANCIAL
ASSISTANCE, MAY 1975

May 1975

LANSING COMMUNITY COLLEGE DISTRIBUTION OF FINANCIAL ASSISTANCE

Types of Awards	1970-71		1971-72		1972-73		1973-74		1974-75 est.	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
Supplemental Educational Opportunity Grant	47	\$ 21,533	74	\$ 17,920	107	\$ 33,942	862	\$ 316,993	912*	\$ 343,518
National Direct Student Loan	80	39,556	160	44,614	130	61,572	902	312,283	1,598	516,342
Basic Educational Opportunity Grant	--	-----	---	-----	---	-----	66	14,242	533	298,621
LCC Trustee Scholarships and Grants	36	10,222	84	12,829	236	65,000	131	54,362	230	72,800
Student Government Scholarships	6	1,856	9	1,683	11	2,000	9	1,419	18	2,975
Federal College Work Study Program	97	37,775	162	77,824	236	160,000	341	240,596	399	280,000
College Student Aid Work Program	134	140,000	140	145,000	160	150,000	160	160,000	197	175,000
Martin Luther King Grant	19	2,965	23	3,268	18	3,100	28	3,317	5	500
Private Athletic Scholarships	3	1,269	2	788	2	600	2	619	3	500
Federal Nursing Scholarships	11	6,870	22	9,284	32	18,826	15	7,200	7	6,120
Federal Nursing Loans	10	6,634	33	15,999	34	18,091	27	16,200	18	12,136
Scholarships by Private Donors	49	15,515	76	23,330	71	29,132	175	37,508	195	41,575
Federal Law Enforcement Grants	40	8,291	86	14,660	292	32,290	847	72,532	950	95,000
Federal Law Enforcement Loans	18	8,495	11	2,460	15	3,000	16	2,436	12	2,000
Veteran and Student Short Term Loans	159	12,547	426	40,189	550	60,000	743	78,340	545	51,617
State of Michigan Competitive Scholarships	33	10,013	82	26,987	80	30,234	63	24,743	85	33,000
Total Number of Awards	742	\$323,531	1,390	\$436,835	1,974	\$667,787	4,387	\$1,342,990	5,707	\$1,931,704
Total Number of Students	692		1,210		1,626		3,408		3,900	

*A student may be eligible for more than one award, but award amounts must not be greater than his need. Approximately one-half (1/2) of the students need must be met by work or loan. Beginning 1973-74 half-time students were eligible for SEOG, NDSL, and CWSP. A student must be enrolled full-time to receive a BRUG award.

*Data Processing Report
April 23, 1975

D. LANSING COMMUNITY COLLEGE MANAGEMENT-BY-OBJECTIVES
DOCUMENTS FOR DEPARTMENT OF FINANCIAL AIDS (ADOPTED
1 JULY 1975)

1. To administer programs of student financial aids, employment placement and veterans' services
2. To plan, implement, and evaluate a comprehensive program of student financial aid including Federal, State, Institutional, and Local Private Funds
3. To provide counseling services to students, in order to maximize the effectiveness of both the financial aid programs and the student employment program
4. To establish and maintain effective relationships with community agencies, business and industry in order to establish new financial aid sources and open doors for employment opportunities for students
5. To establish, implement and evaluate new Federal, State, Institutional, Private Foundation and Local Donor Programs of financial assistance
6. To plan, organize and implement a more effective data processing system to maintain financial aid and college work study information and monitor all financial aid related to need and academic progress for Federal Financial Aid Programs
7. (excluded from consideration)
8. To evaluate the financial aids, placement and veterans' services to determine the effectiveness for students at the College
9. To pursue a program of self-improvement in order to perform more effectively as an administrator

LANSING COMMUNITY COLLEGE

'BO-1)

STUDENT PERSONNEL SERVICES

Neil Shriner (name) Routine (objective-type) Financial Aids, Placement, July 1, 1974 to June 30, 1975 (date: from-to)

Statement of Objective: To administer programs of Student Financial Aids, Employment Placement No. 1 and Veterans' Services

Final Review and Evaluation: (date)

Implementation Activity	Evaluation Criteria	Review
1. Establish and maintain an Administration by Objectives system within the Financial Aid, Placement, and Veterans' Services Area.	1. ABO documents are available and are maintained on a continuous basis.	(date)
2. Recommend to the Dean of Student Personnel Services a budget that reflects the needs of the Financial Aid, Placement and Veterans' Services Department.	2. Budget is at level of satisfaction to the Dean of Students and the Business Manager.	(date)
3. Request adequate staffing to maintain an effective student service and be able to follow through on the details of the programs.	3. No major complaints are received.	(date)
4. Maintain a cooperative working relationship within the Financial Aid, Placement and Veterans' Services Department.	4. No major complaints are received.	(date)

STUDENT PERSONNEL SERVICES

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page

Implementation Activity	Evaluation Criteria	Review
5. Conduct departmental meetings to provide internal communication and cooperatively plan with the employee within the department.	5. Meetings are biweekly or as needed. Minutes are available.	
6. Maintain a cooperative working relationship with other departments of the college.	6. No major complaints are received.	
7. Conduct or provide inservice training experiences for the staff within the Department.	7. At least one formal session is held during the year.	
8. Encourage the staff to improve their skills by taking classes, attending workshops or inservice training sessions.	8. Each staff member takes at least one class per year.	
9. Evaluate employees of the department based upon the objectives cooperatively established and the job descriptions for each employee.	9. Objectives are reviewed semi-annually; annual performance review occurs. All reviews are documented.	

LANSING COMMUNITY COLLEGE

'BO-1)

STUDENT PERSONNEL SERVICES

Neil Shriner
(name)

Routine
(objective-type)

Financial Aid, Placement
and Veterans' Services
(department)
July 1, 1974
to June 30, 1975
(date: from-to)

Statement of Objective: To plan, implement, and evaluate a comprehensive program of student financial aid including Federal, State, Institutional, and Local Private funds.

No. 2

Final Review and Evaluation: (date)

Implementation Activity	Evaluation Criteria	Review (date)
1. Read and know the laws and regulations governing Federal, State, Institutional and Local Private financial aid programs including being knowledgeable about current Federal and State legislation relating to financial aid.	1. Read all Federal and State laws and regulations related to financial aid.	(date)
2. Request federal funds to participate in the Educational Opportunity Grant, National Direct Loan, College Work Study, Nursing Scholarship and Loan, Law Enforcement Grant and Loan, and Cuban Loan Program.	2. All requests should be submitted by stated deadlines for each program unless beyond our control with authorization to submit past deadline.	(date)
3. Administer Federal, State, Institutional and Local Private financial aid programs according to law and regulations for each program.	3. All Federal, State, Institutional and Private Foundation reports should be complete with a high degree of accuracy. Audit reports should also be satisfactory.	(date)

STUDENT PERSONAL SERVICES

(page)

Implementation Activity	Evaluation Criteria	Review
4. Review all financial aid applications to determine financial aid eligibility and award financial aid based upon the law and regulations of the Federal, State, Institutional, Private Foundations, and Local Donor Programs.	4. Satisfactorily meet the financial needs of students.	
5. Maintain records, data processing reports, and statistical information for Federal, state and Institutional annual reports and audits of all financial aid programs.	5. Well organized methods of keeping records, reports, and statistical information. No major complaints are received.	
6. Conduct a follow-up study of students receiving financial assistance to determine whether the financial aid programs are meeting their needs to be able to attend college.	6. Follow-up study is conducted based on questionnaire to assist in developing costs budget.	
7. Assist the Dean of Students in developing unit costs for students served in financial aids, placement, and veterans' services.	7. Unit costs are developed as needed to the satisfaction of the Dean of Students.	

LANSING COMMUNITY COLLEGE

(ABO-1)

STUDENT PERSONNEL SERVICES

Neil Shriner (name) Routine (Objective-type) Financial Aids, Placement, and Veterans' Service (department) July 1, 1974 to June 30, 1975 (date: from-to)

Statement of Objective: To provide counseling services to students, in order to maximize the effectiveness of both the financial aid programs and the student employment program.

(Final Review and Evaluation) (date)

Implementation Activity	Evaluation Criteria	Review
1. Counsel with students regarding financial aid and placement.	1. Time is scheduled for student appointments and drop-ins. No major complaints are received. Satisfactory rating is obtained from student questionnaires.	(date)
2. Meet with groups of students from high schools and the college concerning financial aids and employment placement.	2. Group meetings are scheduled and "logged" for incoming, current students, and students who plan to transfer.	(date)
3. Visit high school counselors and students informing them about financial aids and placement.	3. Meetings are scheduled at the high schools and at the College.	(date)
4. Speak to freshmen orientation sessions about financial aid and placement services.	4. Work with Counseling Department to meet with freshmen Orientation sessions in the fall and classes during the year.	(date)

STUDENT PERS. AEL SERVICES

(_____)
page

Implementation Activity	Evaluation Criteria	Review
5. Prepare a new Financial Aid and Placement Brochure.	5. To be ready for distribution for Fall 1974.	
6. Publicize information about financial aid and employment placement through the college catalog, school newspaper, and bulletin boards.	6. By deadlines for catalog and continuously for school newspaper and bulletin boards.	
7. Provide financial aid counseling and information to students transferring to other colleges and universities.	7. Students are seen continuously, with particular emphasis Dec. 1, 1974 - May 1, 1975. Log is maintained. No major complaint is received.	
8. Inform College Counselors about developments in financial aids, employment placement and veterans' services.	8. Continuously through divisional departmental meetings.	

LANSING CC 'UNITY COLLEGE

(ABO-

STUDENT PERSONNEL SERVICES

Mr. Neil G. Shriner (Name) Routine (objective-type) Financial Aids, Placement, and Veterans' Services July 1, 1974 to June 30, 1975 (date: from-to)

Statement of Objective: To establish and maintain effective relationships with community agencies, business and industry in order to establish new financial aid sources and open doors for employment opportunities for students.

(Final Review and Evaluation) (date)

Implementation Activity	Evaluation Criteria	Review
1. Meet with representatives of local business, industry and community agencies to establish new sources of financial assistance.	1. Maintain number of local donors and amount of local donations.	(date)
2. Notify local donors of the progress of students who receive their awards.	2a. Each term and after the end of the fiscal year, June 30. 2b. No major complaints are received.	(date)
3. Post all part-time and full-time jobs on bulletin boards.	3. Bulletin boards are maintained continuously.	(date)
4. Meet with local business and industrial representatives to establish open lines of communication to post jobs with the placement office.	4. Contact at least ten (10) of the large employers and visit with smaller employers who need placement of students on jobs--contingent upon employment of additional full-time staff person.	(date)

LANSING CC 'UNITY COLLEGE (ABO-
STUDENT PERSONNEL SERVICES

Mr. Neil G. Shriner (name) Developmental - Innovative and Veterans' Services Financial Aid, Placement, July 1, 1974
(objective-type) (department) to June 30, 1975
(date: from-to)

Statement of Objective: To establish, implement and evaluate new Federal, State, Institutional, Private Foundation and Local Donor Programs of financial assistance.

No. 5

(Final Review and Evaluation) (date)

Implementation Activity	Evaluation Criteria	Review
1. Administer the new Federal Basic Grant Program of financial aid entitlement to students who are both full time freshman and sophmores.	1. BOG program is underway.	(date)
2. Implement the new requirements of determining financial need for all students on vocational rehabilitation and inform the appropriate rehabilitation counselor.	2. Satisfactorily implement this requirement and communicate in writing to vocational rehabilitation.	(date)
3. Assist the various divisions in implementing the College's Divisional Awards to renewal, second year students.	3a. Satisfactorily work with Divisional Award Committee Chairman to coordinate the expanded program.	(date)
4. Work to establish a state opportunity grant program for needy students.	3b. No major complaints are received. 4. Actively work with the Michigan Financial aid Association Legislative Committee and local legislators for passage and implementation of S.B. 451.	(date)

STUDENT PERSONNEL SERVICES

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Implementation Activity	Evaluation Criteria	Review
5. Expand the Federal Off-Campus Work Study Program to better meet the needs of students and the needs of the community.	1. Increase the Off-Campus Work Study Program by 25% contingent upon Federal funds.	
6. To work toward maintaining the current level of funding for financial assistance and with increase in basic grant program which includes full time sophomores for the first time.	1. Maintain current level of funding.	

LANSING COMMUNITY COLLEGE

(ABO-1)

STUDENT PERSONNEL SERVICES

Neil G. Shriner (name) Resolution (objective-type) Financial Aid, Placement, and (department) July 1, 1974 to June 30, 1975 (date: from-to)
Veterans Services

Statement of Objective: To plan, organize and implement a more effective data processing system to maintain financial aid and college work study information and monitor all financial aid related to need and academic progress for Federal Financial Aid Programs.

No. 6

(Final Review and Evaluation) (date)

Implementation Activity	Evaluation Criteria	Review
1. Plan, organize, and implement with data processing a new system to replace the present system to monitor accurate financial aid information and to monitor all financial aid students receive so that the need of students is not exceeded and Federal requirement are met.	1. By October 1, 1974, contingent upon the college's priorities for data processing needs.	(date)
2. Establish an academic progress monitoring system with data processing to meet the Federal requirements of satisfactory progress of students receiving financial aid.	2. By January 1, 1975 based upon College priorities for data processing needs.	(date)
3. Develop a program to retrieve detailed statistical data from data processing for Federal reports.	3. By August 1, 1975 based upon College priorities for data processing.	(date)

LANSING COMMUNITY COLLEGE

(3-1)

STUDENT PERSONNEL SERVICES

Mr. Neil G. Shriner
(name)

Developmental - Innovative
(objective-type)

Financial Aids, Placement,
and Veterans' Services
(department)
July 1, 1974 to
June 30, 1975
(date: from-to)

Statement of Objective: To evaluate the financial aids, placement and veterans' services to determine the effectiveness for students at the College.

Final Review and Evaluation: (date)

Implementation Activity	Evaluation Criteria	Review
1. Provide periodic written summaries of the status and development of programs in operation within the financial aid, placement, and veterans' services area.	1. Semiannually or more often as requested to level of satisfaction of Dean of Students.	(date)
2. Send out a questionnaire to students on financial aid and work-study to evaluate the effectiveness of the programs and services.	2. Questionnaire is designed and utilized by March 15, 1975.	(date)
3. Report the results of the questionnaire to the Division and President's Council.	3. Results are tabulated and reported by May 15, 1975.	(date)
4. Work with College follow-up and research personnel providing input for a follow-up survey to former students relating to effectiveness of financial aid, placement, and veterans' services along with other follow-up information from other departments and divisions.	4. By May 14, 1975.	(date)

STUDENT PERS. NEL SERVICES

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Implementation Activity	Evaluation Criteria	Review
5. On the basis of the questionnaires, surveys, and evaluation of management by objectives, prepare recommendations for improvement and change for the 1975-76 academic year.	5. To be done by May, 1975.	

LANSING COMMUNITY COLLEGE ()-1)

STUDENT PERSONNEL SERVICES

Mr. Neil G. Shriner (name) Personal (objective-type) Financial Aids, Placement, July 1, 1974
to June 30, 1975
(date: from-to)

Statement of Objective: To pursue a program of self-improvement in order to perform more effectively as an administrator.
No. 9

Final Review and Evaluation: (date)

Implementation Activity	Evaluation Criteria	Review
1. Attend professional meetings of the Midwest Financial Aid Association and Michigan Financial Aid Association to improve professional competence.	1. Three professional meetings at least during the year.	(date)
2. Attend Financial Aid Workshop to improve effectiveness as a financial administrator.	2. One during the year.	(date)
3. Serve as a member of the Tri-County Manpower Planning Council to contribute to the greater Lansing community needs.	3. Attend called meetings regularly.	(date)
		(date)

E. FORM DEVISED FOR FINANCIAL AIDS' DIRECTOR: ALLOCATION
OF TOTAL ANNUAL TIME SPENT ON FINANCIAL AIDS

ALLOCATION OF TOTAL ANNUAL TIME SPENT ON FINANCIAL AIDS

NAME _____

TITLE OF POSITION _____

Directions: On this form, the objectives for your position are listed as they appear on current MBO documents. For each one, please estimate the percentage of annual time you allocate to completion of the objective. Estimate only the time allocated to FINANCIAL AIDS. If your job includes other responsibilities, percentages will not total 100%.

OBJECTIVE 1 - To administer programs of Student Financial Aids, Employment Placement, and Veterans' Services. _____

OBJECTIVE 2 - To plan, implement, and evaluate a comprehensive program of student financial aid including Federal, State, Institutional, and Local Private Funds. _____

OBJECTIVE 3 - To provide counseling services to students, in order to maximize the effectiveness of both the financial aid programs and the student employment program. _____

OBJECTIVE 4 - To establish and maintain effective relationships with community agencies, business and industry, in order to establish new financial aid sources and open doors for employment opportunities for students. _____

OBJECTIVE 5 - To establish, implement, and evaluate new Federal, State, Institutional, Private Foundation and Local Donor Programs of financial assistance. _____

OBJECTIVE 6 - To plan, organize, and implement a more effective data processing system to maintain financial aid and college work study information and monitor all financial aid related to need and academic progress for Federal Financial Aid Programs. _____

OBJECTIVE 7 - To establish a career planning and placement center, contingent upon employment of an additional full-time professional staff person. _____

OBJECTIVE 8 - To evaluate the financial aids, placement, and veterans' services to determine the effectiveness for students at the college. _____

OBJECTIVE 9 - To pursue a program of self-improvement in order to perform more effectively as an administrator. _____

F. RATING SCALE AND EVALUATION FORM DEVISED FOR SUPERVISOR
EVALUATION OF FINANCIAL AIDS DIRECTOR

SUPERVISOR EVALUATION OF FINANCIAL AIDS DIRECTOR

On the following form, you are asked to evaluate the performance of a financial aids administrator in the achievement of his objectives as they are listed on Lansing Community College Management-by-Objectives documents for the 1974-75 academic year.

Each major objective for the administrator is listed, followed by the evaluation criteria established for activities performed to achieve that objective.

The following scale should be utilized for evaluation. Mark directly on these forms.

- A. Procedure or service not accomplished
- B. Task is partially implemented or needs improvement
- C. Satisfactory performance as evidenced by appropriate documentation or absence of any major complaint
- D. Task is well done
- E. No evidence to judge performance

Name of administrator to be evaluated _____

OBJECTIVE: TO ADMINISTER PROGRAMS OF STUDENT FINANCIAL AIDS
EMPLOYMENT PLACEMENT AND VETERANS' SERVICES

CRITERIA	RATING
1. MBO documents are completed on schedule.	_____
2. MBO documents accurately and completely represent the responsibilities of the financial aids department.	_____
3. Budget materials are completed on time.	_____
4. Expenditures for the financial aids department are written within budget guidelines.	_____
5. Minutes of departmental meetings are submitted.	_____
6. Employee evaluations are completed and submitted by established deadlines.	_____
7. In-service training is planned and implemented annually.	_____
8. Working relationships within the department of financial aids are cooperative and beneficial.	_____
9. Cooperative working relationships are maintained with other departments of the College.	_____

OBJECTIVE: TO PLAN, IMPLEMENT, AND EVALUATE A COMPREHENSIVE
PROGRAM OF STUDENT FINANCIAL AID INCLUDING FEDERAL,
STATE, INSTITUTIONAL, AND LOCAL PRIVATE FUNDS.

CRITERIA	RATING
10. Requests for federal funds are submitted by stated federal guidelines for each program.	_____
11. Federal reports are completed, as indicated by satisfactory audit reports.	_____
12. State reports are completed, as indicated by satisfactory audit reports.	_____
13. Institutional and Private reports are completed, as indicated by satisfactory audit reports.	_____
14. Financial aid applications are reviewed to determine eligibility and awards are made to students.	_____
15. Follow-up study of students receiving aid is done.	_____

16. Unit costs for the department are developed. _____
17. Record-keeping, reports, and statistical information is maintained for all areas of financial aid. _____

OBJECTIVE: TO PROVIDE COUNSELING SERVICES TO STUDENTS, IN ORDER TO MAXIMIZE THE EFFECTIVENESS OF BOTH THE FINANCIAL AID PROGRAMS AND THE STUDENT EMPLOYMENT PROGRAMS.

CRITERIA	RATING
18. Counseling service is provided for drop-ins and scheduled student appointments.	_____
19. Group meetings are held for high school and current college students who indicate interest in financial aid.	_____
20. Financial aids information is provided at freshman orientation sessions.	_____
21. Financial aids information is provided to high school counselors.	_____
22. A financial aids brochure is prepared by Fall, 1974.	_____
23. Financial aids information for the college catalog and newspaper is available as evidenced by publication.	_____
24. Financial aids information is displayed on college bulletin boards.	_____
25. Financial aids developments are described at divisional meetings.	_____

OBJECTIVE: TO ESTABLISH AND MAINTAIN EFFECTIVE RELATIONSHIPS WITH COMMUNITY AGENCIES, BUSINESS AND INDUSTRY IN ORDER TO ESTABLISH NEW FINANCIAL AID SOURCES AND OPEN DOORS FOR EMPLOYMENT OPPORTUNITIES FOR STUDENTS.

CRITERIA	RATING
26. New sources of financial aids are solicited from local business and community agencies.	_____
27. Current sources of financial aid from local business and community agencies are maintained.	_____
28. Local donors receive a progress assessment of the students they support at the end of each term and at the end of the fiscal year.	_____

OBJECTIVE: TO ESTABLISH, IMPLEMENT, AND EVALUATE NEW FEDERAL, STATE, INSTITUTIONAL, PRIVATE FOUNDATION, AND LOCAL DONOR PROGRAMS OF FINANCIAL ASSISTANCE.

CRITERIA	RATING
29. New Federal Basic Grant Program is implemented for full time freshmen and sophomores.	_____
30. Vocational Rehabilitation receives determination of financial need for vocational rehabilitation students according to new requirements.	_____
31. College Divisional Awards are renewed for second year students.	_____
32. State opportunity grant program is established for needy students.	_____
33. Off-campus Work Study Program is expanded by 25% in 1974-75.	_____
34. Maintain current level of funding for the basic grant program which included full time sophomores for the first time in 1974-75.	_____

OBJECTIVE: TO PLAN, ORGANIZE, AND IMPLEMENT A MORE EFFECTIVE DATA PROCESSING SYSTEM TO MAINTAIN FINANCIAL AID AND COLLEGE WORK STUDY INFORMATION AND MONITOR ALL FINANCIAL AID RELATED TO NEED AND ACADEMIC PROGRESS FOR FEDERAL FINANCIAL AID PROGRAMS.

CRITERIA	RATING
35. A new data processing system monitors need of students on financial aid so that need is not exceeded and Federal requirements are met.	_____
36. New data processing system monitors academic progress of students on financial aid so that Federal requirements are met.	_____
37. A program to retrieve statistical data from Data Processing for Federal Reports is ready by August, 1975.	_____

OBJECTIVE: TO EVALUATE THE FINANCIAL AID, PLACEMENT AND VETERANS' SERVICES TO DETERMINE THE EFFECTIVENESS FOR STUDENTS AT THE COLLEGE.

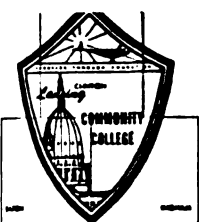
CRITERIA	RATING
38. Summaries of the status and development of financial aids programs are presented to the Dean as requested.	_____

- 39. Questionnaires are administered to students regarding effectiveness of services. _____
- 40. Questionnaire results are reported to the Division and President's Council by May 1975. _____
- 41. Work with other College research personnel to implement a follow-up survey to former students regarding financial aids services. _____
- 42. Recommendations for improvement and change are prepared by May 1975. _____

OBJECTIVE: TO PURSUE A PROGRAM OF SELF-IMPROVEMENT IN ORDER
TO PERFORM MORE EFFECTIVELY AS AN ADMINISTRATOR.

- | CRITERIA | RATING |
|---|--------|
| 43. Attend at least three professional meetings during the 1974-75 academic year. | _____ |
| 44. Attend one financial aids workshop during the 1974-75 academic year. | _____ |
| 45. Attend meetings of the Tri-County Manpower Planning Council regularly. | _____ |

G. COVER LETTER, RATING SCALE, AND EVALUATION FORM DEVISED
FOR STUDENT RECIPIENTS OF FINANCIAL AID



Serving the Heart
of Michigan

Lansing Community College

419 N. CAPITOL AVE., LANSING, MICHIGAN 48914

May 30, 1975

Dear Student:

Enclosed is a questionnaire concerning the financial aid department at Lansing Community College. We are attempting to evaluate the quality of services in order to determine how we might be more helpful to students' needs. You are receiving the questionnaire because our records indicate that you have been awarded some type of financial aid during the current academic year.

A large response to this survey will contribute to the most accurate and realistic results possible. Even if you are not presently receiving financial aid, will you take a few minutes to complete the questionnaire, and then return it in the envelope provided as soon as possible? The questionnaire results will be anonymous; do not include your name.

Thank you for taking time to help.

Sincerely,

Martha Smydra

Martha Smydra

Administrative Assistant to the Dean of Students

Neil Shriner

Neil Shriner

Director of Financial Aids

RATING SCALE FOR FINANCIAL AIDS QUESTIONNAIRE

Directions: Mark only one response to each statement.

Use any kind of pen or pencil.

Do not indicate your name on this questionnaire.

For each of the following statements, respond according to the following scale.

- A. Service not evident or totally unsatisfactory.
- B. Service partly done or needs improvement.
- C. Service is satisfactory -- no complaint.
- D. Service is well done.
- E. Outstanding effort is made.
- F. No experience -- no basis to answer.

FINANCIAL AID QUESTIONNAIRE

1. Please check each type of financial aid you receive and/or have received during the 1974-75 academic year.
 - A. Scholarship _____
 - B. Loan _____
 - C. Grant _____
 - D. Employment _____
2. Counseling is available concerning availability and use of financial aid. _____
3. Appointments with financial aid staff can be made within 3-5 days of request. _____
4. Financial aid staff is willing to answer questions on telephone or drop-in basis. _____
5. Financial aid staff is courteous and interested in your concern. _____
6. Application procedures for financial aid is clearly explained. _____
7. Information about types of financial aid seems accurate and up-to-date. _____
8. Financial aid information is displayed on bulletin boards and in college publications. _____
9. Help is available in completing financial aid applications and other paperwork. _____
10. Financial aid checks are available and distributed on time. _____
11. Financial aid checks are accurately matched to your need. _____
12. The procedure for adjusting the amount of financial aid (more or less) is clearly explained. _____
13. Financial aid is available in time to cover my expenses. _____
14. Distribution of checks is conducted with courtesy. _____
15. Your obligation to repay the financial aid and/or demonstrate academic progress is clearly stated. _____
16. To the best of your knowledge, college record keeping is up-to-date and accurate. _____
17. The financial aid you receive is enough to allow you to attend college. _____
18. You have had an opportunity to comment on the effectiveness of the financial aids service. _____
19. The time between application for aid and receiving your aid seems reasonable to you. _____
20. What suggestions do you have to improve financial aids services at Lansing Community College? (Continue on other side if necessary)

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