INFORMATION TO USERS

This was produced from a copy of a document sent to us for microfilming. While the most advanced technological means to photograph and reproduce this document have been used, the quality is heavily dependent upon the quality of the material submitted.

The following explanation of techniques is provided to help you understand markings or notations which may appear on this reproduction.

1. The sign or "target" for pages apparently lacking from the document photographed is "Missing Page(s)". If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting through an image and duplicating adjacent pages to assure you of complete continuity.

2. When an image on the film is obliterated with a round black mark it is an indication that the film inspector noticed either blurred copy because of movement during exposure, or duplicate copy. Unless we meant to delete copyrighted materials that should not have been filmed, you will find a good image of the page in the adjacent frame. If copyrighted materials were deleted you will find a target note listing the pages in the adjacent frame.

3. When a map, drawing or chart, etc., is part of the material being photographed the photographer has followed a definite method in "sectioning" the material. It is customary to begin filming at the upper left hand corner of a large sheet and to continue from left to right in equal sections with small overlaps. If necessary, sectioning is continued again—beginning below the first row and continuing on until complete.

4. For any illustrations that cannot be reproduced satisfactorily by xerography, photographic prints can be purchased at additional cost and tipped into your xerographic copy. Requests can be made to our Dissertations Customer Services Department.

5. Some pages in any document may have indistinct print. In all cases we have filmed the best available copy.
PLEASE NOTE:

In all cases this material has been filmed in the best possible way from the available copy. Problems encountered with this document have been identified here with a check mark. 

1. Glossy photographs or pages 
2. Colored illustrations, paper or print 
3. Photographs with dark background 
4. Illustrations are poor copy 
5. Pages with black marks, not original copy 
6. Print shows through as there is text on both sides of page 
7. Indistinct, broken or small print on several pages 
8. Print exceeds margin requirements 
9. Tightly bound copy with print lost in spine 
10. Computer printout pages with indistinct print 
11. Page(s) lacking when material received, and not available from school or author. 
12. Page(s) seem to be missing in numbering only as text follows. 
13. Two pages numbered . Text follows. 
14. Curling and wrinkled pages 
15. Other

University Microfilms International
MAKING THE MOST OF PROGRAM REVIEW: A STUDY OF THE ORIGINS, OPERATIONS, AND OUTCOMES OF PROGRAM REVIEW AT THE OHIO STATE UNIVERSITY

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

by
Daniel Anthony DiBiasio, B.A., M.A.

* * * * *

The Ohio State University
1982

Reading Committee:
Dr. Donald P. Sanders
Dr. George P. Ecker
Dr. Robert J. Silverman

Approved By
Donald P. Sanders
College of Education
ACKNOWLEDGMENTS

I wish to acknowledge my deep appreciation and indebtedness to the following persons; their assistance attests to the interdependent nature of scholarly inquiry:

Dr. Donald P. Sanders, who "inherited" me and whose advice and counsel have been invaluable,

Dr. George P. Ecker, for his high professional standards and for his friendship,

Dr. Robert J. Silverman, for his critical spirit and for his commitment to improving higher education,

Ohio State's program review "staff"-- Drs. Robert G. Arns, William Poland, Terry Roark, William Unger, and Robin Wilson, for their interest and support, especially to Dr. William Poland, who gave his time generously and who enriched my doctoral studies immeasurably. It was indeed my good fortune to have worked with him,

The Graduate School Staff -- particularly Dr. Jean Girves, for helping me believe I could successfully complete this project and Miss Karen Kreutzfeld, for her skillful typing and incomparable patience,

Mr. and Mrs. Anthony J. DiBiasio, Jr., for being parents every son should have, and

Chris, whose unconditional love provided so much support, encouragement, and understanding.
VITA

April 19, 1949 ......................... Born - Cleveland, Ohio

1971 .................................................. B.A., Ohio Wesleyan University
Delaware, Ohio

1972 .............................................. M.A., The Ohio State University
Columbus, Ohio

1972-1974 ...................................... English Teacher, Bay Village High
School, Bay Village, Ohio

1974-1978 .................................. College Administrator, Rocky Mountain
College, Billings, Montana

1978-1979 .................................. Graduate Administrative Associate,
University College, The Ohio State
University, Columbus, Ohio

1979-1982 .................................. Graduate Research Associate,
The Graduate School, The Ohio State
University, Columbus, Ohio

PUBLICATIONS

"Assessing Quality in Graduate Programs: An Internal Quality
(with J. Girves and W. Poland).

FIELDS OF STUDY

Major Field: Higher Education

Studies in Administration and Organization of Higher Education.
Dr. George P. Ecker, Dr. D. A. Severino, and Dr. Robert J.
Silverman

Studies in Curriculum. Dr. Judith Ayers and Dr. Philip L. Smith

Studies in Educational Development. Dr. Donald P. Sanders
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>ii</td>
</tr>
<tr>
<td>VITA</td>
<td>iii</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>vi</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>vii</td>
</tr>
<tr>
<td>Chapter</td>
<td></td>
</tr>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>The Setting: Program Review at The Ohio State University</td>
<td>1</td>
</tr>
<tr>
<td>The Study: Purpose and Description</td>
<td>2</td>
</tr>
<tr>
<td>The Context: Program Review Activities in American Higher Education</td>
<td>7</td>
</tr>
<tr>
<td>II. LITERATURE SURVEY</td>
<td>23</td>
</tr>
<tr>
<td>Theoretical Literature</td>
<td>23</td>
</tr>
<tr>
<td>Program Review: Processes and Procedures</td>
<td>32</td>
</tr>
<tr>
<td>Program Review Outcomes</td>
<td>62</td>
</tr>
<tr>
<td>III. RESEARCH METHODS</td>
<td>69</td>
</tr>
<tr>
<td>Introduction</td>
<td>69</td>
</tr>
<tr>
<td>Constant Comparative Method</td>
<td>70</td>
</tr>
<tr>
<td>Sample Selection</td>
<td>73</td>
</tr>
<tr>
<td>Procedure</td>
<td>75</td>
</tr>
<tr>
<td>Other Research Methods</td>
<td>79</td>
</tr>
<tr>
<td>Limitations</td>
<td>83</td>
</tr>
<tr>
<td>IV. ORIGINS AND OPERATIONS</td>
<td>85</td>
</tr>
<tr>
<td>The Origins of Program Review</td>
<td>85</td>
</tr>
<tr>
<td>The Operations of Program Review</td>
<td>100</td>
</tr>
<tr>
<td>V. OUTCOMES</td>
<td>118</td>
</tr>
</tbody>
</table>
VI. SUMMARY AND CONCLUSIONS.................................................... 150

Summation .................................................. 150
Conclusions .................................................. 155
Considerations for Future Research ............. 171
In Conclusion ............................................. 173

APPENDIXES

A. References for Data Reported in Table 4, Chapter II (p. 67) ......................... 175

B. Distribution of Program Sample of Organizational Unit (N = 27) ................. 178

C. The Ohio State University, Memorandum of Introduction .......................... 179

D. The Ohio State University, Letter of Invitation ........................................... 180

E. The Ohio State University, Interview Guide ................................................ 182

F. The Ohio State University, Presentations and Publications Related to Program Review ................................................................. 183

G. The Ohio State University, 1978 Guide for Program Reviewers .................. 184

H. References Used to Analyze Program Review Criteria Listed in Chapter II (p. 51) .......................................................... 212

BIBLIOGRAPHY ................................................. 214
LIST OF TABLES

Table                                                                 Page
1. A Contrast of Tightly Coupled and Loosely Coupled Program Review Processes ........................................................... 28
2. Correspondence Between Program Review Purposes and Program Review Mechanisms ........................................................... 54
3. Perceived Outcomes of Program Review Presented by Administrative Unit (Adapted from Poulton, 1978b) ........................................................... 64
4. A Summary of Program Review Outcomes at Eleven Universities .................................................................................... 67
5. Distribution of Selected Interview Sample by Leadership Role in Program Review ........................................................... 74
6. Distribution of Selected Program Sample and Selected Interview Sample ........................................................... 76
7. Identification of Outcomes in 27 Program Reviews at The Ohio State University ........................................................... 120
8. Distribution of Program Review Outcome Categories Identified by Cohort Groups ........... 142
9. Outcome Categories Identified by Program and Phase of Review .................................................................................................... 145
10. Distribution of Action Items (N = 195) in Seven (7) Signed Memoranda of Understanding by Percent ............ 148
LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1</td>
<td>A Schematic Representation of the Concept of Parties to Review Contrasted to an Administrative Hierarchy</td>
<td>105</td>
</tr>
<tr>
<td>Figure 2</td>
<td>A Schematic Representation of the Sequence of Events in the Program Review Process at Ohio State</td>
<td>110</td>
</tr>
</tbody>
</table>
Chapter I

INTRODUCTION

This study has investigated the academic program review process in use at The Ohio State University and has focused on its origins, its operations, and its outcomes. Chapter I establishes the dimensions and sets the context of the study. The first section of the chapter describes the research setting; the second section discusses the general features of the study, and the third section traces the evolution of evaluation activities in American higher education and explains the recent acceleration and transformation of those activities.

The Setting: Program Review at The Ohio State University

Three factors warrant a study of program review at Ohio State: history, maturation, and critical acclaim. First, unlike most innovations in higher education, the historical development of Ohio State's review process is well documented and can serve as a case study of the development of innovations in educational organizations.
Second, the review process was initiated in 1976. As a result, sufficient time has elapsed, enabling a variety of programs in different stages of review to be studied. Third, program review at Ohio State has received favorable critical attention (Academy, 1979a; Barak, 1980; Heydinger, 1980a; Kells, 1981; Mingle, 1981; Perry, 1978; Seeley, 1981; Wilson, 1981a). Generating systematically derived knowledge of a program review system that is noteworthy can improve understanding of that system and possibly lead to the improvement of others. That review system is the subject of this dissertation.

The Study: Purpose and Description

Stated briefly, the purpose of the study is to investigate in depth the program review process at The Ohio State University with particular attention focused on identifying outcomes of review. Three research questions guide this investigation:

(1) What are the origins of the program review process at The Ohio State University?

(2) How does the program review process at The Ohio State University function?

(3) What are the outcomes of the program review process at The Ohio State University?
Data for the study were gathered from multiple sources. To render an accurate historical account of the origins of program review at Ohio State, archival records were used as primary source documents. Archival records for this portion of the study included minutes, memoranda, and documents obtained from the work of four relevant committees: the Graduate Council, the Policy and Standards Committee, its Academic Review Subcommittee, and the Council on Academic Affairs. Interviews with persons who designed the new review system comprised another source of data. To explain how program review operates, data gathered from published and unpublished descriptions of the process and data from participant observation of program review meetings were used. To identify the outcomes of program review, interviews with program review participants were analyzed as were a number of program review documents.

The identification of outcomes is an important feature of this study. To identify outcomes, twenty-seven programs involved in the review process were studied. All twenty-seven programs in the sample had been in review for a minimum of one year. Focused interviews (Kidder, 1981) with 71 program reviewers were conducted between September 1980 and February 1981. Faculty members, program heads, college deans, and central administrators were among those interviewed. Moreover, closure documents from seven reviews in the sample were analyzed. The interviews and the documents were subjected to the constant comparative method, a technique for systematically collecting, verifying, organizing, and analyzing qualitative data.
Definition of Terms

**Program**: "A coherent set of academic activities with specified goals" (Ohio, 1978, p. 3).\(^1\)

**Program Review**: A process of institutionally sponsored review involving a "searching, comprehensive evaluation of an existing or a proposed program" (Arns and Poland, 1980b, p. 65).

**Program Review Outcomes**: Results of program review that affect actors and/or activities.

**Primary Outcomes**: Program review outcomes that predominantly benefit the program community (actors and/or activities inside programs).

**Secondary Outcomes**: Results of program review that predominantly benefit the university community (actors and/or activities outside programs).

**Documented Outcomes**: Results of program review that were identified by program review participants and appeared in program review documents.

**Communicated Outcomes**: Results of program review that were identified solely by program review participants.

\(^1\)Ohio (1978) refers to the Guide for Program Reviewers which is included as Appendix G.
Significance

The study is judged to have two levels of significance, one local and the other general. The study has local significance to the extent that it contributes to a greater understanding, perhaps even refinement, of The Ohio State University program review process. The study has general significance because of its contribution to knowledge about program review and related areas of scholarship. More specifically, it is judged significant for three reasons.

First, the study increases the available knowledge about program review in higher education. Heldman (1975) recognized a need for more information and emphasized that optimal mechanisms for program review have not evolved. Craven (1980a) is explicit about the need to make information more readily available:

A number of institutions currently have exemplary approaches to academic program evaluation. The concepts, guidelines, and operating experience that accompany these approaches should be shared more widely with other institutions (p. 452).

If program review processes are shared and examined critically, "effective methods can be identified and frequent mistakes avoided" (Wilson, Poland, and Seagren, 1981, p. 11K).

Second, the study adds to a new area of program review research. Few studies have attempted to identify program review outcomes systematically. Those that have have either concentrated on state level program review (Barak and Berdahl, 1978) or on institutional reviews (Poulton, 1978a). Poulton (1978a) noted that there is a paucity of outcome-oriented research:
Until recently little research has attempted to determine the ultimate outcomes and contributions that planning and management techniques actually make to institutional functioning and decision-making (p. 5).

By systematically studying program review outcomes at a single institution, the research presented here adds to this new area of investigation.

Third, the study has potential theoretical relevance for understanding educational organizations as loosely coupled systems (Weick, 1976). Hailed as "an important new concept" by Wise (1979, p. 92), loose coupling is a particular way to think about educational organizations (Silverman, 1980); it is a perspective that takes an open systems view of organizations (Ecker, 1979) and challenges the more conventional rational view. Weick (1976) has written that:

... preoccupation with rationalized, tidy, efficient, coordinated structures has blinded many practitioners as well as researchers to less tightly related clusters of events ... . By loose coupling, [I] intend to convey the image that coupled events are responsive, but that each event also preserves its own identity and some evidence of its physical and logical separateness .... Loose coupling also carries connotations of impermanence, dissolvability, and tacitness all of which are potentially crucial properties of the "glue" that hold organizations together (p. 3).

In 1976, program review at Ohio State was changed to a loosely structured process (Chapter IV, pp. 85-99). Findings from this investigation are used to test the potential functions of loose coupling. In so doing, additional systematic inquiry is directed toward "examining the possibility that educational organizations are most usefully viewed as loosely coupled systems" (Weick, 1976, p. 16).
To set this study in a broader context, it is necessary to trace the general evolution of review and evaluation activities in higher education.

The Context: Program Review Activities in American Higher Education

Academic program review in American higher education is receiving considerable attention today. On campuses (McMichael, 1973), in state higher education agencies (Barak and Berdahl, 1978), and in legislative committees (Berdahl, 1977) emphasis is given to program review activities. National study commissions, too, have examined and have made recommendations about program review (Carnegie, 1975; Carnegie, 1980; Sloan, 1980). In addition, two recently published monographs are devoted entirely to the subject (Craven, 1980; Feasley, 1980), and numerous program review presentations are given at professional meetings and national conferences. In 1980-81 alone, the American Association for Higher Education, the American Association for State Colleges and Universities, the Association for Institutional Research, and the National Center for Higher Education Management Systems were among the groups that sponsored presentations about the topic. Indeed, an avid interest in program review is evident.

Despite this high level of interest, it is wrong to conclude that academic program review suddenly burst upon the scene in American higher education. Its antecedents emerged early in the nation's collegiate history and have evolved over the past three and a half centuries.
Harcleroad (1980) has written that the precedent for program evaluation in the United States was set when Harvard College held its first commencement exercise in 1642. Unlike today's graduation ceremonies, the early ones required that students demonstrate their knowledge publicly before receiving baccalaureate degrees. Seniors were tested in the use of Latin, Greek, and Hebrew as well as in their ability to dispute philological theses in logic, rhetoric, and grammar and philosophical theses in ethics, physics, and metaphysics.

The examinations were conducted by public officials and college trustees. John Winthrop, Governor of the Massachusetts Bay Colony, and six members of the Harvard Board of Overseers were among the group of examiners for the first commencement. Governor Winthrop's journal entry for September 27, 1642, records that college degrees were conferred after the nine students "performed their acts so as to give good proof of their proficiency in the tongues and arts" (Morison, 1935, p. 260).

Commencements have changed since then and so have evaluation activities. During the period between the late nineteenth century and the early twentieth century, institutional accreditation was established as a voluntary form of evaluation (Orlans, 1975). Following the founding of accreditation bodies, statewide governing boards developed. These agencies coordinate and manage public and, in some cases, private colleges and universities on a statewide basis.
Program review is now one of their major responsibilities (Berdahl, 1971). In recent years, the trend has been toward more systematic and more formalized review processes, a trend that makes today's program review activities "new and noteworthy" (Engdahl and Barak, 1980, p. 144).

One measure of just how new and noteworthy is found in a recent study which reports that 76 per cent of public postsecondary institutions surveyed in a 13-state region had begun formal and systematic program review since 1970. Three findings in particular illustrate how current reviews differ from past review efforts: "(1) the increased number of institutions now conducting internal reviews; (2) the increased comprehensiveness of the reviews; and (3) the increased impact of review on institutional planning and budgeting" (Engdahl and Barak, 1980, p. 144).

Clearly, academic program review is cast in new roles today. What is not always clear, however, are the reasons why these new roles have developed. Why have so many institutions focused so much recent attention on academic program review? The question merits consideration for it involves examining the factors that precipitate the widespread interest in program review today.

Current Pressures for Program Review

In his farewell address to the nation, former President Jimmy Carter said that America is experiencing "an uneasy period . . . a time of transition." His comments are particularly relevant for
higher education because they underscore the fact that contemporary conditions press institutions to change and to adapt in ways that challenge established priorities and question fundamental practices. Factors exerting pressure on higher education include political, economic, and social forces, many of which lead institutions to rely more heavily on particular strategies, some old and some new, to remain viable. One of these strategies is academic program review.

Political Pressures. Political pressures on colleges and universities stimulate an interest in program review, especially among public institutions. Philip Hauser (1975) noted:

... the public university is more subject than the private to both direct and indirect political control by state officials and legislatures, although both may be recipients of public funds and both are, therefore, subject to pressures generated by flux of funds or its cessation (p. 165).

Ernest House (1981) stated that the "big impetus for formal evaluation of educational programs came in 1965 when Senator Robert Kennedy attached an evaluation rider to the Elementary and Secondary Education Act ..." (p. 1). These statements reflect two of the most prevalent political pressures affecting higher education in general and program review in particular: accountability and external regulation.

Accountability is a word with many meanings (Mortimer, 1972). As it relates to program review, "accountability implies an obligation to provide outcomes that are commensurate with costs and to demonstrate that outcomes justify costs" (Bowen, 1979, p. 20). According to Folger (1980a), "governors and legislators are giving increased
attention to the accountability of public agencies" (p. 49). One effect of the concern with accountability has been the move on the part of a few legislatures to invest in their committees more education-related powers. For example, in Colorado a budget committee of the legislature abolished the fiscal review functions of the state's higher education coordinating board and added that function to its own responsibilities; Nebraska, too, has enacted a law giving a legislative committee responsibility for developing institutional role and scope statements (Millard, 1977).

In response to accountability demands, some state governments are requiring colleges and universities to justify expenditures and to demonstrate outcomes. Program review is viewed as a way to help meet that requirement. Donald K. Smith (1980) explained:

The increasing intervention of government into the affairs of colleges and universities has been motivated by an understandable effort to increase accountability. If colleges and universities seek to check the spread of such intervention, therefore, it follows that they must strengthen their own process of auditing and evaluating their own activities to be certain that these activities are conducted efficiently and effectively. Evidence of vigorous effort to assure economy and effectiveness must be provided to government and the public. Appropriate accountability becomes the price of freedom. And, since the academic enterprise, if it is to be reputable, must be directed by scholars rather than politicians, the effort and investment required to protect such distance from government should be supported (p. 56).
Others have linked program review to the demand for accountability (Callan, 1978; Gentile, 1980; Horton, 1974). A report by the Michigan Council of Graduate Deans (1975) considers the relationship between program review and accountability:

Recently, agencies outside the universities have been questioning the value of supporting graduate education at the present levels. A systematic program of evaluation may make universities better able to respond to these criticisms (p. 2).

Program review may be what Kenneth Boulding (cited in Bowen, 1979) recommended in the following quotation:

The demand for greater accountability, it seems to me, must be divided two ways. On the one hand, universities must not simply shrug it off as meaningless. They should devote resources to improving the feedback from the processes in which they engage. The university should conceive of itself as an experiment in teaching, learning, and the expansion of knowledge. Its information collection apparatus should be designed with useful feedback in view . . . .

Along with this, however, there must also be a constant campaign of explication directed toward the public at large and to its representatives as to the necessity for freedom, redundancy, space to move, opportunities, and so on. Without this, the drive for efficiency is disastrous (pp. 19-20).

Accountability, then, has accelerated an interest in program review, so has external regulation.

Frank Newman (1973) predicted "more, not less, government influence in higher education" for the years ahead (p. 26). Although the federal role in higher education is currently being reconsidered, findings of a recent study by Mortimer and McConnell (1978) demonstrate Newman's perspicacity:
external agents have been increasing their influence over college and universities. Federal and state agencies are taking a more active role in directing the course of higher education. State legislatures and state-wide governing boards, for example, are increasingly scrutinizing institutional budgets, faculty workloads, and procedures for controlling excesses in faculty and student behavior (p. 3).

Martin Trow (1975) made a similar observation:

... in almost all industrial societies there is under way a broad movement toward greater central political direction of the development of higher education, arising out of its growing cost and increased relevance for many areas of national life. In a sense, postsecondary education has become too important and too costly to be left to professors and educators alone (p. 114).

Trow's comments apply to pending regulatory controls in the Netherlands. The Dutch Minister of Education, Arie Pais, recently issued a revolutionary proposal calling "for a university inspection system in which government appointed inspectors would be assigned to faculties in universities to insure laws are being enforced and to check the quality of teaching" (Vromen, 1980, p. 10).

Although the relationship between government and higher education in the United States is less adversarial than the one implied in the Dutch plan, it is not without adversaries. One critic, for example, said that "the nuisance value of Washington's myriad regulations and requirements now greatly exceeds the limited amount of financial aid it provides" (Garment, 1981, p. 20). Another observer blamed the steady growth of state governing boards -- the number went from 17 to 49 between 1939 and 1969 -- for "inadvertently creating a thicket of
rules, even more levels of administration, increased use of formal budgeting procedures for control, and further removal of decision-makers from students in the learning process" (Newman, 1973, p. 15). Green (1980), who examined state responsibilities and program review, offered perhaps the most succinct comment related to the issue of regulation. "The program review process," he said, "is propelled by regulatory concerns" (p. 75).

In a political environment characterized by accountability and regulation, many state governments consider program review as a means to exercise their oversight role over higher education. This concern is reflected in the frequently stated purposes of state-level program review: to conserve resources, to avoid unnecessary duplication of programs, to assure quality, and to assess states' needs for particular programs (Johnson, 1975). To be sure, accountability and regulation are political pressures that direct more attention to program review.

**Economic Pressures.** Economic pressures also stimulate interest in program review. Three economic trends in particular contribute to the importance of program review. They are 1) a general economic slowdown, 2) high inflation rates, and 3) changing student demographic patterns.

Before each factor is considered in detail, it is useful to issue two caveats about economic analysis in general. One concerns the variable effects of economic trends. It is important to keep in mind that there are fluctuations around economic trends, that economic
trends are usually expressed as averages, and that averages can mask wide variations within a sample (Folger, 1980b). These points are especially pertinent where enrollment forecasts for higher education are concerned, because projected declines rarely apply equally to all sectors and to all types of institutions.

The other caution is simply a reminder that projections and forecasts are hypothetical and temporal. Regarding future enrollments, economist Howard Bowen (cited in Arnold, 1980) said:

Some economists, after taking into account their view of the job market for college graduates, are predicting enrollment declines of as much as 40 per cent. They may be right . . . my point is only that such a drop in enrollment is not preordained (p. 23).

In the same article, he also noted that "the dip, if it occurs, is likely to be temporary" (p. 24). These warnings aside, economic conditions are having and will continue to have a profound impact on colleges and universities. David Breneman (1970) of the Brookings Institution surveyed the economic landscape of higher education and stated his belief that "no sector of higher education will be immune from serious economic pressures for the foreseeable future . . . ." (p. 5).

Many institutions have enjoyed a relatively long period of economic prosperity and have encountered few serious financial constraints holding back their efforts to grow. Between 1870 and 1970, colleges and universities witnessed a century of steady growth, with unprecedented gains occurring during the last twenty years of
that period (Carnegie, 1975). In those twenty years, institutions became accustomed to expansion and learned quickly to depend on growth for improvement. In recent years, however, growth rates have subsided. Under these new conditions, strategies such as program review, designed "to effect institutional and faculty development and growth without net expansion," are needed (Arns, 1978, p. 3).

Kenneth Boulding (1975) commented on the implications of a shift from rapid growth to slowdown:

> For several generations, a considerable proportion of the human race, and the United States in particular, has enjoyed growth in almost all aspects of social life. We have had continuous growth in population, almost continuous growth in per capita real incomes, in productivity of the overall society, and in the gross national product (GNP). All our institutions and ways of thinking have survived because they were well adapted to an age of rapid growth. If this age is now coming to an end, large adjustments will have to be made in our ways of thinking, in our habits and standards of decision-making, and perhaps even in our institutions (p. 8).

Program review is regarded by many as a way to help make necessary adjustments.

For many institutions, the economic slowdown is forcing them to make fiscal and program adjustments. Fiscal adjustments are needed, in part, because "energy prices and continuing high inflation rates threaten to increase faster than institutional revenues from taxes, tuition, gifts, and investments" (Magarrell, 1980, p. 6). Many institutions consider program review to be a more reasonable way to reallocate resources than by imposing often feckless across-the-board decreases (Mortimer and Tierney, 1979). Program review is also used
by institutions to make program adjustments. Economic pressures can force institutions to establish program priorities or to make choices about which programs or program components to expand, contract, consolidate, or terminate.

Using program review to establish program priorities, according to Allan Cartter (cited in Mortimer and Tierney, 1978), is one way to make qualitative improvements in higher education:

The predominant theme of the 1960's in higher education was quantitative growth - development of new programs and institutions and physical expansion of old ones to serve a rapidly expanding, young audience. The emergent theme of the late 1970's and 1980's must be qualitative growth - strengthening of educational processes, adaptation to new social needs and new audiences, and effective use of scarce resources. Because academic budgets in the past have depended principally on enrollments, some view with alarm the prospect of a declining college-age population. Yet such a period permits a reordering of priorities and provides an opportunity for colleges and universities to place high on the agenda efforts to provide inner growth and educational enrichment. The resilience of educational institutions will be tested in their responses to these changing needs and resources (p. xi).

Program review can facilitate qualitative growth when economic conditions prevent quantitative growth.

High inflation rates also contribute to a greater reliance on program review. Jacobsen (1980) reported that for many in higher education the maintenance of quality during periods of high inflation is critical:

They believe that, as inflation persists and the supply of people of traditional college age declines, it is the content and quality of academic programs that will determine whether many institutions can hold their own -- or even, in some cases, whether they can survive (p. 9).
Heldman (1975), too, has noted that program review is used on some campuses to guide resource allocation, the need for which is partially due to high inflation rates.

Finally, current demographic trends also influence the increased use of program review. Even with the quibbling over how much student enrollment will decline, most agree that the net effect will be problematic. Clark Kerr has predicted a "demographic depression," and Breneman (1979) asserted that demographic trends are "the single most important economic force bearing on higher education" (p. 3). Despite a wide range of predicted declines among eighteen to twenty-two year olds -- rates from 15 to 40 per cent have been published -- there is little doubting the fact that enrollments are no longer increasing at rates comparable to those in the 1960's (Heldman, 1975).

State agencies have already begun to respond to what is believed to be an imminent drop in enrollment. Some are considering abandoning enrollment driven funding models in favor of new budget formulas designed to yield more fiscal stability (Academy, 1979b; Education, 1979b).

These economic conditions -- a general economic slowdown, high inflation rates, and changing demographic patterns -- have accelerated a greater interest in academic program review. Similarly, a variety of social conditions have heightened program review activity.

**Social Pressures.** Social forces inside and outside higher education also contribute to the current emphasis on program review. External agencies and study commissions have recommended that institutions consider implementing program review procedures.
Internally, the general social and intellectual climate within colleges and universities prompts administrators, faculty, and students to consider emphasizing review-like activities. Taken together, these social forces can have a powerful impact on initiating new forms of program review.

National and regional research and development organizations are among the external groups promoting program review. The Educational Testing Service is known for its efforts in this area. A series of projects were initiated during the last decade under the leadership of Mary Jo Clark to assess characteristics of graduate departments and to determine methods for judging quality in existing graduate degree programs (Clark, 1979). Also, various government agencies have sponsored workshops about how to design and implement program review; among them were the Education Commission of the States, the National Center for Higher Education Management Systems, and the Western Interstate Commission for Higher Education.

Numerous commission and council reports have recommended that colleges and universities examine their academic planning activities (Carnegie, 1975; Carnegie, 1979; 1980; Report, 1971; Sloan, 1980;), and many of these reports contain explicit recommendations about program review. For example, the final report of the Carnegie Council on Policy Studies in Higher Education, *Three Thousand Futures: The Next 20 Years for Higher Education* (1980) includes the following:
We are doubtful about state-mandated reviews of academic programs. We believe that such review is better conducted by the institutions themselves, by the accreditation agencies, and by the students making their choices; and we question the wisdom of this great an intrusion into academic affairs (p. 124).

The Sloan Commission Report, A Program for Renewed Partnership (1980) contains a different view:

Each state higher education board should arrange for periodic reviews of the quality of educational programs at every public college and university within the state. The reviews should be conducted by academic peer groups. Their reports, along with the institutions’ responses, should be published after a one-year delay. To the greatest extent possible, each state should make use of regional and other accrediting associations in organizing reviews (p. 102).

Campus constituents have been instrumental in reawakening an interest in assessing quality, fostering program improvement, and protecting academic integrity. Administrators have lobbied for program review on their campuses and view it as a way to measure program effectiveness, to determine campus priorities, and to justify resource allocation (Stepsis, 1980). Although they have not pressed for program review specifically, students, buoyed by recommendations in numerous national reports, want more involvement in campus decision making and governance (Regan, 1981). Their concern has also been expressed in the movement for student evaluation of faculty. Launched in the 1960's, it has largely succeeded, as many institutions now provide students with formal means to evaluate their professors (Myers, 1979). Also, the student consumer movement of the past decade has influenced program offerings and standards (Education, 1979a).
In addition, faculty members at various institutions have initiated program review procedures. At Ohio State and at Illinois, faculty members were deeply involved in developing program review processes (Poland and Arns, 1978; Wilson, 1981b). Stepsis (1978) offered one reason why faculty have become more involved in program review. He observed that "it is difficult for a faculty member to resist completely the idea of an organized program review. As an instrument of critical self evaluation, it has an inescapable role in the university" (p. 3). Although many faculty believe that program review is an activity consonant with the nature of higher learning, some perceive it as threatening. Bollier's (1974) metaphor explains why some may view program review as a threat:

The contemplative quiet of the groves of academe during the prosperous days is now the desperate quiet of a beleaguered garrison under siege. From whatever watchtower we peer, the battalions of our foes advance across terrain already littered with our dead and dying; our federal funds gone, our enrollments peaking out, job markets for our graduates declining, our budgets shrinking, and our ears filled with hostile battle cries, with demands for this and that; relevance, open admissions, affirmative action, accountability. Certainly in such an atmosphere of trial, evaluation may seem a threat and not an opportunity, and internal evaluation especially may seem a Trojan horse designed to have us undo ourselves (p. 235).

A confluence of political, economic, and social pressures is providing the impetus for a burgeoning interest in program review today. As a result, postsecondary institutions are relying more heavily on the evaluation of their academic programs to cope with changing conditions, to establish academic and fiscal priorities, and
to assess the quality of their programs. Although not new to American higher education, program review emerged during the last decade as an important institutional activity.

Assumptions

Embedded in the foregoing analysis is a set of assumptions about higher education in the United States. These assumptions are explicitly stated because they undergird this study:

(1) Higher education is increasingly more of a political enterprise.

(2) Higher education cannot, in the immediate future, depend on steady and substantial increases in traditional age students and in historic funding levels.

(3) Higher education is increasingly susceptible to an uncertain external environment.

(4) Higher education, by its nature and history, can accommodate formal and organized critical self-evaluation.

These assumptions reflect the current environment within which higher education operates. It is an environment wherein program review takes on new meaning.

In Chapter I the setting, the general features, and the context of this study have been described. Chapter II presents a review of pertinent literature.
Chapter II
LITERATURE SURVEY

The previous chapter has presented a general introduction to this investigation. Chapter II contains a survey of pertinent theoretical and practical literature related to program review. The first section of this chapter concentrates on theoretical literature; the second section discusses scholarship pertaining to program review processes and procedures; and the third section includes an analysis of literature concerning program review outcomes.

Theoretical Literature

Theoretical literature from organizational theory and from evaluation theory contributes to a conceptual understanding of program review. Organizational theory helps to clarify why program review is an appropriate activity in today's higher education milieu. Furthermore, it illuminates particular structural features of the Ohio State program review process. Similarly, evaluation theory is used to explain specific conceptual elements of Ohio State's program review process. The tenets of organizational theory and evaluation theory discussed in this chapter establish the theoretical dimensions of the study.
Organizations as Open Systems

Environmental Influence, Uncertainty, and Feedback. The open systems view of organizations can aid in understanding why colleges and universities have increased their program review activities in recent years. A basic assumption of the open systems perspective is that organizations are dependent upon inputs from their environment for survival (Katz and Kahn, 1966). Under stable environmental conditions, organizational behavior is relatively consistent, and the flow of inputs remains fairly constant. Tomorrow is likely to resemble today (Hedberg, Nystrom, and Starbuck, 1976). However, when environmental conditions become less stable, organizational functioning is threatened. Unstable environments are problematic because they leave organizations vulnerable, make them more susceptible to external influence, and create uncertainty (Thompson, 1967). Increasingly, the environments of organizations, particularly educational organizations, have become unstable, evolving toward turbulent field conditions "characterized by complexity as well as rapidity of change" (Terreberry, 1968, p. 59).

Rapidly changing demands and resource fluctuations contribute to environmental uncertainty for many colleges and universities today. In this dynamic state, educational organizations need sensitive feedback mechanisms that are "informative in character and furnish signals to the system about its environment and about its own functioning in relation to the environment" (Katz and Kahn, 1966, p. 22).
Program review can provide that kind of feedback. Rippey (1973) underscored the importance of evaluation as a feedback mechanism; he noted that such feedback should "provide the information and intelligence necessary for institutional survival" (p. 11). Mandelbaum's (1979) discussion of the "intelligence of universities" also suggests a key role for program review. In his view, "intelligence, as it is applied to learning, depends on the ability of major instructional units to measure, understand, and manipulate their own behavior and its impact on students" (p. 721). In the same vein, Seagren and Bean (1981) wrote:

Higher education can ill afford to ignore the changing environment, consequently, colleges and universities must now, more than ever, be concerned with developing coherent strategies for academic program development. These strategies must provide opportunity for faculty and administration to document the rationale, impact, and results for programmatic decisions. The documentation, in turn, can serve as a vehicle for communicating between internal and external constituencies (p. 2).

Effective program review can help universities cope with environmental uncertainty.

Yet, due to the nature of educational organizations, implementing useful feedback mechanisms is difficult. Cohen and March (1976) explain that educational organizations, more than other types of organizations, require rather elaborate structures to provide information on their behavior and on the behavior of their subsystems. In their view, elaborate feedback mechanisms are needed
because educational organizations are "organized anarchies" characterized by unclear goals, unclear technologies, and fluid participation.

Loosely Coupled Systems. "Open systems theorists," said Scott (1981), "are also attempting to recognize that organizations are loosely coupled systems" (p. 53). The terms "loosely coupled systems" or "loose coupling" mean that organizational elements can be joined without tight and rigid connections (Weick, 1976). Essentially, the view of organizations as loosely coupled systems comes from the imposition of the three characteristics of organized anarchies on the open systems perspective.

Organizational tasks are tightly coupled when "goals and technologies are clear and participant involvement in decision making is predictable and substantial" (Ecker, 1979). According to Weick (1976):

... preoccupation with rationalized, tidy, efficient, coordinated structures has blinded many practitioners as well as researchers to less tightly related clusters of events ... By loose coupling, [I] intend to convey the image that coupled events are responsive, but that each event also preserves its own identity and some evidence of its physical and logical separateness ... Loose coupling also carries connotations of impermanence, dissolvability, and tacitness all of which are potentially crucial properties of the "glue" that hold organizations together (p. 3).

Weick insists that loose coupling in structural arrangements of organizations can be highly adaptive for the system as a whole. Moreover, Scott (1981) pointed out:
The concept of loose coupling can also be applied to the relationship among structural units such as work groups or departments. Inspection of official organizational charts may lend the impression that these units are all highly interrelated and closely coordinated, whereas observation of their actual behavior may reveal that they are only slightly and occasionally connected (p. 108).

Educational leaders and administrators trained in the more conventional literature on organizations and administration may look on loose coupling as dangerous and defective, something to be remedied. However, Weick has noted that the concept of loose coupling need not be used normatively (Weick, 1976, p. 6). Educational leaders might instead explore what advantages there are in loosely coupled systems. What appear to be organizational liabilities from a traditional point of view may, nevertheless, present important opportunities.

Regarding those opportunities:

Weick notes a number of ways in which loose coupling . . . may be highly adaptive for the organization, particularly when confronting a diverse, segmented environment. To the extent that departmental units are free to vary independently, they may provide more sensitive mechanisms to detect environmental variation. Loose coupling also encourages opportunistic adaptation to local circumstances; and it allows simultaneous adaptation to conflicting demands. Should problems develop with one departmental unit, it can be more easily sealed off or severed from the rest of the system. Moreover, adjustment by individual departments to environmental perturbances allows the rest of the system to function with greater stability. Finally, allowing local units to adapt to local conditions without requiring changes in the larger system reduces coordination costs for the system as a whole (Scott, 1980, p. 248).
Broad distinctions become apparent when program review processes are placed along a tightly coupled/loosely coupled continuum. Tightly coupled review processes are likely to stress efficiency. They can be characterized by their narrow purposes, uniform review procedures, and centrally prescribed review criteria. In contrast, loosely coupled review processes typically have comprehensive purposes, variable review procedures, and program specific review criteria. Table 1 summarizes these distinctions between tightly coupled and loosely coupled review systems. Examples appear in parentheses.

Table 1

A Contrast of Tightly Coupled and Loosely Coupled Program Review Processes

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Tightly Coupled</th>
<th>Loosely Coupled</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Purpose</td>
<td>Limited (program elimination, accountability)</td>
<td>Comprehensive (program improvement)</td>
</tr>
<tr>
<td>2. Procedure</td>
<td>Uniform (standard questionnaire)</td>
<td>Variable (no fixed format)</td>
</tr>
<tr>
<td>3. Criteria</td>
<td>Prescribed and Centrally Determined (productivity measures)</td>
<td>Program Specific (multiple measures)</td>
</tr>
</tbody>
</table>

Program review at Ohio State reflects many elements of loosely coupled systems. Chapter VI, pp. 165-171, considers Ohio State's program review process as a loosely coupled system.
Evaluation Theory

Utilization-Focused Evaluation. In the last decade, evaluation theory and practice have been given considerable scholarly attention and have made significant conceptual progress (Patton, 1978; 1980; Stufflebeam, Foley, Guba, Hammond, Merriman, and Provus, 1971; Worthen and Sanders, 1973). An indication of that progress is seen in the shift away from an overreliance on the natural science paradigm of evaluation. Fincher (1973) discussed this trend. He noted:

... the growing recognition that the specific methods developed for investigation of physical and biological phenomena in a laboratory setting are not adequate for the evaluation of programs seeking to improve, correct, or benefit human beings. It is not the wrongness of the scientific method that is underscored by this outlook but rather the limitations of narrowly constructed methods in dealing with social, cultural, and psychological complexities (p. 28).

Patton (1980) has written that now two major paradigms undergird evaluation theory and practice and that the natural science paradigm and the utilization-focused paradigm predominate. The natural science paradigm is based on positivist philosophical assumptions, and its aim is prediction. Procedures and methods often used include hypothetico-deductive methods, quantitative measurements, experimental design, and multivariate and parametric statistical analysis. The utilization-focused paradigm is based on anthropological assumptions, and its aim is understanding. Techniques frequently employed are
frequently employed are open-ended interviewing, personal observation, holistic analysis, and detailed description derived from close contact with the targets of the study.

Program review processes have been influenced by both paradigms. The natural science paradigm undergirds review systems that rely heavily on quantitative criteria. Productivity-oriented approaches and performance audits are examples. Similarly, the utilization-focused paradigm underpins many review processes as well. Review systems that attempt to increase qualitative understanding of programs or that attempt to improve programs are typical examples of this approach. Program review at Ohio State can be considered a utilization-focused approach to evaluation. The openness of the process and its concern for program quality and value give it a utilization-focused dimension.

**Decision-Oriented Inquiry.** Dressel (1976) offered a definition of a decision-oriented approach to evaluation. It is "the collection and interpretation, through systematic and formal means, of relevant information which serves as the basis for rational judgment in decision situations" (p. 9-10). Fincher (1973) stressed that the purpose of decision-oriented evaluation is to facilitate decisions that may be made in the immediate future. Corey's (1953) work demonstrates that the notion is not new. Almost twenty years ago he argued that research and study should be the basis for decisions and practices in education.
Evaluation theorists have emphasized a decision-based approach to program evaluation (Alkin, 1973; Gardner, 1977; Stufflebeam, et al., 1977). Recently, Craven (1980a) noted an increase in decision-oriented program review in higher education. His observation is based on the fact that program review results are being linked more readily to decision situations.

**Summative versus Formative Evaluation.** Scriven (1967) was the first to make a distinction between summative and formative evaluation. Summative evaluation is conducted at the conclusion of a program and is intended to make final judgments about the value, worth, and effectiveness of a program. Formative evaluation occurs during the operation of a program and is intended to contribute to program improvement (Cranton and Legge, 1978).

Program review at Ohio State can be viewed as formative evaluation in that it is designed to improve programs and occurs during the operation of the program. Externally sponsored program review often reflects a summative approach.

To summarize this section, it is apparent that organizational theory and evaluation theory can help to clarify theoretical underpinnings of program review. An organizational theory perspective focuses on program review as a feedback mechanism which enables institutions to assess their functioning and to cope with environmental uncertainty. An evaluation theory perspective focuses on program review as a device for making judgments about programs.
Program review at Ohio State is theoretically grounded in both organizational theory and evaluation theory. It rests on ideas commensurable with loose coupling, utilization-focused evaluation, decision-oriented evaluation, and formative evaluation.

Program Review: Processes and Procedures

Literature about program review processes and procedures is extensive. This section presents an analysis of that scholarship; it concentrates on program review activities in general and on particular components of program review processes and procedures.

Overview

A number of general works provide an overview of program review activities. McMichael (1973) conducted one of the earliest surveys. She investigated how institutions evaluate their graduate programs and compiled data from 125 universities across the country. Her report summarized who is responsible for carrying out graduate program review, what kind of programs are reviewed, when and how they are reviewed, and for what purposes. McMichael found that a total of 63 separate criteria were used in the reviews conducted by the institutions she studied and that more institutions had procedures in place for reviewing the merits of proposed programs than had procedures for reviewing existing programs.
During the last decade, The Educational Testing Service sponsored two major projects related to graduate program review. Mary Jo Clark (1973; 1977) led both studies.

The 1973 study concerned the often troublesome and controversial issue of quality assessment in higher education (Clark, 1973). It was undertaken to show the limitations of using reputational ratings as a single measure of program quality and to generate other measures of quality, e.g., student satisfaction; environment for learning; alumni perceptions. The study surveyed 57 graduate school deans from a stratified sample of universities (Clark, 1974, p. 1). The deans were asked about program review practices in different fields, about the relationships between program review and program purpose, and about the availability and usefulness of a variety of quality measures.

The study reported a number of interesting findings. One finding was that perceived differences in program purpose existed among natural sciences, social sciences, and humanities. For example, graduate deans rated training research scholars most important in the natural sciences and training teachers most important in the humanities. The deans also concurred that the relative importance of program review criteria varies according to purpose. Assessing faculty research performance was rated more important in programs training researchers than in programs training teachers and practitioners (Clark, 1974, p. 2). In addition, the study stressed
that multiple criteria could be used more effectively to determine quality than could a single criterion. Among the suggested criteria were the following:

1. The quality of students in the program,
2. The quality or "humaneness" of the environment within the department,
3. The quality of resources available to students and faculty members, and
4. The performance of the program's alumni.

Clark noted elsewhere that using multiple criteria for measuring program quality is probably "more useful for 'internal evaluations' than for 'national rankings'" (Scully, 1976, pp. 111).

The second study about graduate program review surveyed 454 university department heads from 80 different academic disciplines in 134 universities (Clark, 1977). The study analyzed judgments about information needs in program review. Three major findings were:

1. Judgments and perceptions by students, faculty, and alumni were often considered very important for departmental use even though they have not been used in the departments' most recent reviews;
2. Evaluation of the teaching component of the faculty role was perceived to be a very important part of program review; and
3. More than half of the department heads indicated interest in the development of some standard procedures that could be adapted to the particular needs of individual departments or universities.

Based on these findings, Clark concluded that a departmental level inventory designed to gather opinions and judgments from students, faculty, and alumni has potential acceptability and usefulness. Such an instrument is now available (Assessment, 1979).

Hall (1978) used the case study method to examine program review at several institutions. He wanted to determine if current systematic evaluation efforts were really new, or if they "were merely more visible systems providing information for and faculty participation in administrative decision making" (p. 1). His study compared and contrasted traditional review activities with newer and more systematic efforts at seven large universities in the United States. Hall concluded that the new formal systems of program review are indeed "new and significant modifications of more traditional program review activities" (p. 2). He based his conclusion on the knowledge that the newer systems used more staff to conduct evaluation, focused on more organizational dimensions, and linked evaluation more tightly to budgeting.

Smythe, Butler, Jones, and Wilson (1979) studied program review practices of American and Canadian medical schools. They collected survey data from 121 medical school deans and conducted five site
visits for more in-depth information. Among the areas considered in
the study were the purposes of review, review committee selection,
procedures, data, and results.

Two thirds of the medical schools surveyed conduct departmental
review. Moreover, 75 per cent of those schools have initiated their
review process since 1972. Two conclusions drawn from the study are
noteworthy. First, the investigation determined that program review
can be a stabilizing rather than a disruptive force for departments.
Second, the study showed that typically program review does not solve
major institutional problems.

Under the auspices of the National Center for Higher Education
Management Systems and the Western Independent Commission for Higher
Education, Engdahl and Barak (1980) conducted a comprehensive
investigation of program review. Data from state agencies in the 13
states affiliated with the Western Interstate Commission for Higher
Education were used in the study, which described program review
practices, analyzed program review issues, and discussed program
review outcomes.

In addition to the state agency data, three hundred ten
institutions in those states were surveyed to obtain information about
program review. Findings show that approximately one third of the
institutions review at least a portion of their instructional
programs. Three quarters of them reported having established review
processes since 1970. The study also noted that larger public colleges and universities conduct program review more frequently than other types of institutions.

Three other general works cover a wide range of program review topics: Feasley's (1980) overview discusses program review as one of many levels of evaluation in organizations; Craven's (1980b) volume considers several different approaches to program review; and Poulton's (1981) monograph on academic planning systems contains a chapter devoted to program review.

The literature cited in this overview supports two widely held assertions about program review in general. First, the studies show that comprehensive and systematic approaches to program review are recent phenomena. Second, they uphold the contention that current program review practices differ from traditional approaches.

Designing and Conducting Program Review

"Design the system well," is H. R. Kells' (1981) laconic advice about designing program review processes. The importance of his dictum is expressed by Petrie (1981), who cautioned that "nowhere is the danger of creating a disturbance for the organization by introducing an evaluation system more apparent than in the design of the basic evaluation mechanism" (p. 12). Literature related to specific characteristics of program review can be grouped into seven
areas. They are need, purposes, participation, scope, criteria and data, mechanisms, and closure. Other relevant issues are also discussed.

**Need.** Heydinger (1978) urged institutions about to embark on designing a program review process, to "stop long enough to examine the reasons for conducting such a review, the feasibility of it, and the objectives to be served by it" (p. 1). He suggested that a "needs assessment" can illuminate these issues and proposed a framework for conducting the assessment. If the results favor designing a program review procedure, the institution will have readily available systematically derived information about how a sector of the campus perceives aspects of program review.

**Purposes.** Four major purposes of program review are prevalent in the literature. They are accountability, resource allocation, planning, and improvement.

Accountability is one purpose for conducting program review (Barak, 1980; Dearing, 1979; Petrie, 1981; Smock, 1981a). Occasionally the term "accountability" is not used explicitly but is implied in a purpose statement. Kelly and Johnson (1980) imply accountability when they identify the determination of "efficiency and effectiveness in academic program operations" as a purpose of program review (p. 60). When accountability is the sole purpose of program review, programs found wanting usually face curtailment, consolidation, or discontinuance.
Resource allocation is frequently cited as a purpose of program review (Barak, 1980; Heldman, 1975; McMichael, 1973; Petrie, 1981; Smock, 1981a). The ability to shift resources among programs is seen as one way to maintain fiscal flexibility during an era of retrenchment (Mortimer and Tierney, 1979). According to a Carnegie Commission report (1975), "reallocation is the main source of flexibility when income growth ends" (p. 87).

Planning is another purpose of program review (Barak, 1980; Peterson, 1980). Peterson asserted that now there is more need for planning-oriented program review (p. 154). Evidence to support his assertion is found in the current interest for establishing academic program priorities (Fuller, 1976; Lawless, Levi, and Wright, 1978; Shirley and Volkwein, 1978). Callan (1980) is emphatic about linking program review with planning. He said that "program review is the cornerstone of the planning structure we will need to weather the financial and enrollment storms . . . and must provide the central focus for our planning and management" (p. 28). For the planning purpose to be fulfilled, however, program review results must be integrated with decision making (Heydinger, 1980b).

Improvement, or what is also called quality improvement, is a prevalent purpose of program review (Sell, 1980). In their study, Engdahl and Barak (1980) found that program review focuses on program improvement more than any other purpose. This finding contradicts an earlier study that reported improvement was only occasionally the
purpose of review (McMichael, 1973). Dearing (1979) justified an improvement-oriented purpose for program review based on philosophical grounds. He maintained that:

if colleges and universities are fulfilling their nature, they should continuously, or at least recurrently, examine their goals and purposes, their resources and strategies, and the results of their efforts for consistency, congruence, and the benefits of these efforts as compared with their costs. Their integrity as institutions as well as persons can heed the Socratic injunction, 'know thyself' (p. 103-104).

Dressel (1981) agreed, and also evoked the Socratic dictum. "The purpose of evaluation," he said, "is to encourage value-based decision making so that the university can be seen as emulating the examined life rather than drifting or making decisions only under pressure or continually taking such actions to advance its own prestige" (p. 25-26).

It is important to establish clear purposes for review because different purposes can require different procedures, different assumptions, and different values. George (1981) observed that "program review conducted primarily to assess program quality may differ significantly from program reviews conducted in order to make decisions about retrenchment, to assess leadership of the department, or as part of the development of a long-range institutional plan" (p. 1). In other words, why an institution chooses to conduct program review will influence how the review is conducted.
Some institutions report having a single purpose for doing program review, while others list several purposes. At Ohio State and at the University of Vermont (hereafter referred to as the Ohio State-Vermont process), the explicit purpose of program review is program improvement (Ohio, 1978). At the University of Illinois (all references to the University of Illinois refer to the Urbana-Champaign campus), on the other hand, four purposes are stipulated (Wilson, 1981b):

1. to recognize program quality and to contribute to program improvement,
2. to enable wise resource allocation decisions to be made,
3. to demonstrate that the campus acts as a custodian of the public interest, and
4. to provide a forum for discussing new program requests.

Participation. The design and practice of program review usually involve the coordinated effort of many people. Mims (1978) raised the question of participation in the design phase of program review. She identified four possible designers: administrators, faculty, consultants, and a mixed group. Others focus on who should be involved in program review activities and on the roles they should play (Gentile, 1980; Wallhaus, 1981). Four major constituents frequently participate in program review: administrators, faculty, students, and alumni.
Participation by administrators varies according to administrative level (Heldman, 1975). Central administrators, i.e., graduate school deans and/or provosts, frequently have responsibility for establishing and maintaining a university-wide review process (Engdahl and Barak, 1980; Lyon, 1979). In addition, central administrators are often responsible for conveying the purposes and procedures of program review to review participants (Guide, 1978; Lyon, 1979). In so doing, they state a university-wide commitment to program review and indicate there is adequate administrative support for review (Horton, 1974; House, 1981). Gentile (1980) suggested that presidents endorse the program review process publicly, thereby underscoring its importance.

College level administrators are also involved in most program review systems. The program review process at The University of Michigan, for example, specifies a key role for college deans, especially at the closure phase of the process; and the Ohio State-Vermont process considers college deans one of the parties to review (Ohio, December 20, 1976; Ohio, 1978). In other program review processes, however, the role of deans can be peripheral. Heldman (1975) examined a number of review systems and noted that "centralized program review tends to reduce college-level input..." (p. 8). Seagren and Bean (1981) made a similar point about the University of Nebraska-Lincoln program review process. They admitted that a dysfunction of that system is the tangential involvement of college deans.
Department and program administrators are typically involved in program review. At Michigan State University, they have major responsibility for conducting review. They assess annually the functioning of their units in the areas of instruction, research, and public service (Freeman, 1981). The Ohio State-Vermont process discourages program administrators from dominating the self-study phase of review but substantially involves them during closure (Ohio, 1978).

Frequently, institutional research officers and staff members participate in program review activities (Dougherty, 1979b). These administrators primarily serve a support role and provide needed data. Occasionally they have a more formal role in review. At the University of Nebraska-Lincoln, review is administered by a separate Office of Program Review whose staff members serve on review committees (Seagren and Bean, 1981).

Thus, many types of administrators are involved in program review and have varying levels of responsibility. Munitz and Wright (1980) made a wise observation about administrative involvement in program review. "Administrators at various levels in the institution," they said, "must recognize the difference between coordinating the program evaluation process and imposing evaluation requirements on academic program faculty" (p. 41).
A common feature of many program review processes established during the last decade is the central role program faculty play. In fact, some institutions describe their systems as "faculty-based" program review processes (Smock, 1981b). Their central role notwithstanding, faculty members can be skeptical of program review because of their past experience with ill-conceived, administratively run reviews, especially those perceived as an "infringement on what has been considered the faculty's major preserve -- the control and management of the curriculum" (Stepsis, 1978, p. 1). Smith (1980) argued forcefully for significant faculty participation:

... unless the faculties of particular institutions are themselves engaged in or directing formal evaluation processes, and unless they are persuaded of the usefulness of such activity by the consequences of their efforts, they will neither understand, nor accept, nor do other than create maximum feasible confusion in the presence of any evaluation activity (p. 47).

Furthermore, he claimed that:

... the indispensable condition of a genuine university is that its faculty assume primary responsibility for the quality, health, and usefulness of its academic programs .... If this is not done, then the reason for being a community of scholars with general responsibility for the recovery, organization, dissemination, and enhancement of knowledge is abandoned. Public universities become simply another agency of the state or society organized to carry out its service functions identified by government or the public generally. Agencies external to the faculty may conceivably produce quicker decisions on program excision, attenuation or alteration than can the faculty, but the price for such a choice is inevitably both demoralization of the academic community, and the withdrawal of that community
into a posture of defending all that now exists rather than attending to the health and quality of all that exists . . . (cited in Barak and Berdahl, 1978, p. 100).

Substantial faculty involvement, then, is one of the salient characteristics of recently developed program review systems (Engdahl and Barak, 1980). On many campuses, faculty have also been key participants in the design of those systems. The genesis of program review at the University of Illinois and at The Ohio State University illustrates how deeply faculty members were involved in designing those review systems (Poland and Arns, 1978; Wilson, 1981b). On the other hand, Sparks (1980) warned against involving too many faculty in review activities for too long a time. He urged administrators against recklessly allocating faculty time to review activities. "We tend to forget its (faculty time) true value and use it as though it is free or very cheap," he said (p. 7). Munitz and Wright (1980) stressed the importance of trust relative to faculty participation:

Trust and participation of campus faculty, as well as of department and college administrators, are essential to academic program evaluation effectiveness. To establish that trust and to sustain that participation, there must be a clear definition of the evaluation objectives, the general context and need for evaluation, and the process to be followed. Also, the results of evaluation must be used fairly (p. 41).

In addition to local faculty members being involved in review, faculty members from other institutions can participate in a university's program review process.
An institution embarked on designing a program review scheme will usually confront the issue of whether to include peer reviewers from other institutions (Mims, 1978). Although several review systems use external reviewers extensively (Hull, 1975; Ohio, 1978; Stepsis, 1978; University of Minnesota, 1974), others use them sporadically, if at all (Dressel and Simon, 1976; Wilson, 1981b). The following quotations make major points for and against the use of peer review:

(1) What is valuable to us, however, apart from what the review report reveals to faculty and administration about the assessment of the program, is the advice the reviewers give: the consultative feature of the process. This is something only disciplinary experts can give and is a principal reason we try to cover all important subdisciplines in a program with a visitor (Hull, 1974, p. 81).

(2) It was unnecessary and expensive to use an external review team to verify the quality of a department which other indicators or other procedures already acknowledged. Similarly, many questions relating the quality of a department do not require disciplinary judgment, e.g., the fairness of the promotion and tenure process or the adequacy of student placement service (Wilson, 1981b, p. 8).

Besides administrative and faculty participation, student involvement in program review is evident.

Students can participate in program review as members of program review committees and as information sources during review (Smock and Brandenberg, 1978). At the University of Illinois, Princeton University, The Ohio State University, and the University of Vermont, students may serve on program review committees (Heldman, 1975; Ohio, 1978).
Alumni are a final group who frequently participate in program review. They are most often used as information resources and are surveyed for their judgments about program performance and their professional standing (Assessment, 1980). The University of Nebraska-Lincoln includes alumni representatives on program review committees (Seagren and Bean, 1981).

**Scope.** The scope of a program review process refers to the dimensions of academic programs that are considered during review. The scope of review sets boundaries around the term "program." Determining the scope of review also involves establishing a mechanism for scheduling reviews and for selecting individual programs for review.

For the most part, the scope of program review activities depends on how an institution defines "program." Petrie (1981) noted that definitions vary. State agencies may define programs as degree programs; universities often broaden that definition to include non-degree programs, and community colleges often make definitional distinctions between technical and transfer programs. The University of Illinois, for example, defines programs in organizational terms -- departments, centers, offices, or institutes (Wilson, 1981b). A more comprehensive definition is used in the Ohio State-Vermont process, where an academic program is a "coherent set of academic activities with specified goals" (Ohio, 1978, p. 3).
Establishing the scope of review also requires determining what aspects of programs will be reviewed. Current program review practices tend to be comprehensive in their treatment of programs. That is, they focus on both graduate and undergraduate components of programs and program inputs, processes, and outputs (Blackburn and Lingenfelter, 1973). Stepsis (1978) favored combining graduate and undergraduate components by conducting comprehensive review, an approach also endorsed by Gentile (1980). An example of a different approach is evident at Pennsylvania State University where separate reviews are conducted for graduate and undergraduate programs (Harf, 1976).

Another aspect of the scope of review is deciding whether all institutional programs or only a portion of them will be reviewed. Many institutions attempt to review all programs within a specified time period (Freeman, 1981; Poland and Arns, 1978; Seagren and Bean, 1981). Alternatively, institutions can employ a screening device to identify only programs that require intensive review (Wilson, 1981b). The former procedure is usually justified on the basis of comprehensiveness; the latter on the basis of efficiency.

Once the scope of a program review system is established, a number of practical considerations surface. One concerns scheduling. When program review is a continuing activity, institutions frequently use a cyclical schedule for review (Gentile, 1980; Petrie, 1981). One study reported that cycles range from four to seven years, with five years
being the average (Engdahl and Barak, 1980). Michigan State University, however, annually audits and evaluates every academic degree unit (Dressel and Simon, 1976; Freeman, 1981; Freeman and Simpson, 1980).

Another practical consideration is establishing a mechanism for selecting programs to be reviewed. Selection criteria vary and often depend on an institution's purpose for conducting review. A number of universities attempt to coordinate program review with accreditation review (Lawless, 1978; Ohio, 1978); some require the college dean to select programs (Ohio, 1978). The University of Nebraska-Lincoln lists five selection criteria (Seagren and Bean, 1981):

1. the relationship of the program to other programs under review,
2. a marked change in student demand,
3. planned program changes,
4. accreditation cycles, and
5. elapsed time since last major review of any kind.

**Criteria and Data.** Selecting appropriate criteria and identifying the sources of data with which to measure criteria are two critical aspects of program review (Blackburn and Lingenfelter, 1973; Giordano, 1976; Wallhaus, 1981). Engdahl and Barak (1980) suggested that program review purposes can help determine the criteria selected.
One study advised using multiple criteria in graduate program review aimed at quality improvement (Assessment, no date). The study was designed to identify a number of criteria that could be used to indicate program quality. The researchers' intentions are clear in the following passage:

The study assumes that educational excellence is represented only partially and imperfectly by any single rating or index of program quality. Though ratings of the reputation of a program by faculty members or other professionals in the same field have a place in program evaluation, they do not provide information about strengths and weaknesses that is needed for program improvement. Also, they tend to lag behind recent departmental changes. Since many activities contribute to program excellence, multiple criteria are needed when judging the level of a program's achievement. This study was an effort to develop measures that would increase the number of criteria that are available for use (16).

The study, which compared questionnaire data from doctoral students, alumni, faculty members, and departmental chairmen in history, chemistry, and psychology programs, identified about 30 indicators of quality.

Findings led to three conclusions: first, that multiple measures are fairer and are more useful, reduce the "halo" problem, and focus on process (Clark, 1976b); second, that most indicators are applicable across disciplines; and third, that two clusters of indicators are identifiable. They are research-oriented indicators (department size, reputation, facilities, financial resources, faculty publications, etc.) and environment-oriented indicators (teaching, the environment
for learning, student satisfaction, etc.). Research-oriented indicators correlated positively with one another and environment-oriented indicators correlated positively with one another. However, research-oriented indicators and environment-oriented indicators usually did not correlate with each other. Therefore, the investigators concluded that (Assessment, no date):

Knowing something about a department's reputation among scholars, for example, often permits a reasonably accurate guess about its size or its resources; but usually says little about its instructional procedures and climate for learning (p. 16).

Institutions use different criteria to assess their programs. An analysis of review criteria in eleven scholarly works about program review found that a total of fifteen criteria were discussed (see Appendix H). The nine most frequently discussed criteria are listed below (the figures in parentheses indicate the number of times those criteria were cited):

1. Centrality of Program (10)
2. Quality of Faculty (9)
3. Quality of Students (8)
4. Comparative Advantage (7)
5. Quality of Facilities (6)
6. Quality of Library Holdings (5)
Several authors address issues related to the use of data in program review. One group supports using multiple data sources to assess criteria (Braskamp, 1981; Clark, 1979; Craven, 1980a; Palola and Bradley, 1978; Petrie, 1981; Smock, 1981a). Smythe, et al. (1979) maintained that "a review which includes the department to be evaluated in structuring the review and identifying meaningful data is more likely to result in a productive exercise for all involved" (p. 289-290). Mims (1978) raised a point about whether to treat data confidentially or openly, and Clark (1979) noted that although data itself cannot improve programs, good information can make a significant contribution toward reaching good decisions.

Using an apt analogy, George (1981) cautioned program reviewers about the use of evaluative criteria and measurement in general:

Those undertaking such review need to keep in mind the Heisenberg Uncertainty Principle in physics. It states very roughly that if you try to measure the position of an electron, that measurement will perturb the electron enough so that its momentum is uncertain; and that, conversely, if you try to measure the momentum of a particle, you will inevitably makes its position uncertain. The point is that the very act of measurement involves a disturbance which may change the thing being measured (p. 9).

George's observation is an endorsement of Barak's (1980) maxim: "it is better to be roughly correct than precisely wrong" (p. 88).
Mechanism. There is no one best way to conduct program review (Barak, 1980; Mims, 1978; Smock, 1981a). Writers have emphasized that evaluation procedures must be tailored to and compatible with the environmental circumstances of individual institutions. Mims (1978) identified three broad approaches to designing program review procedures: adoption, adaptation, and tailor-made. Barak (1980) discussed the shortcomings of the adoption approach. In his view, "it is a mistake for any institution to pick up a program review/approval system from another and plug it in simply because it's been successful elsewhere" (p. 37).

Some general types of review mechanisms have been identified. Mims (1978) defined two broad methods. One is called the "classical experimental method," a prediction-oriented model often used in accountability reviews. The other is called the "social-anthropological method;" it relies heavily on description and interpretation and is used more often in reviews conducted for improvement. Clark (1979) used a similar dichotomy to conceptualize review mechanisms. She distinguished between "accountability" reviews and "developmental" reviews. Finally, Peterson (1980) discussed a "planning-oriented" mechanism for review. Table 2 juxtaposes these broad methods of review with their corresponding purposes, indicating a relationship between purposes and procedures.
Table 2

Correspondence Between Program Review Purposes and Program Review Mechanisms

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Accountability</td>
<td>Classical-Experimental Method (Mims, 1978)</td>
</tr>
<tr>
<td></td>
<td>Accountability Review (Clark, 1979)</td>
</tr>
<tr>
<td>2. Planning</td>
<td>Planning-Oriented Review (Peterson, 1980)</td>
</tr>
<tr>
<td>3. Improvement</td>
<td>Social-Anthropological Method (Mims, 1978)</td>
</tr>
<tr>
<td></td>
<td>Developmental Review (Clark, 1979)</td>
</tr>
</tbody>
</table>

Program review mechanisms are often comprised of several interrelated committees. Three types of committees are commonly used: self-study committees, central review committees, and ad hoc review committees (Engdahl and Barak, 1980). The presence of any one or all of these committees and their functioning vary widely across institutional review systems. Nonetheless, they represent major components of most review mechanisms.

A self-study process is a traditional feature of program evaluation in American higher education and is also a common aspect of recently designed review systems. A study of program review practices
in Ohio's public universities demonstrates the pervasive use of self-study. Every institution in the state reported a self-study phase in its review procedure (Education, 1979a).

The many dimensions of self-study processes are cogently and comprehensively treated in H. R. Kells' (1980), *Self-Study Processes: A Guide for Postsecondary Institutions*. Kells views the self-study process as a method for improving institutions and programs. "To be useful," he said, "self-study processes must be planned, organized, directed, and studied" (p. 29). Furthermore, he listed ten goals of a self-study process:

1. The process should be internally motivated.
2. The top leadership should be committed to the process.
3. The design of the self-study must be appropriate to the circumstances of the institution.
4. The process should contain an informed attempt to clarify goals and to assess achievement of the goals (to study "outcomes") for purposes of improvement.
5. There should be representative, appropriate, and useful participation by members of various segments of the academic community.
6. The process must be well led.
7. The ability of the organization to function effectively should be studied and enhanced.
8. Some improvement should occur both during and as a result of the process.
9. A readable report, potentially useful to several audiences, should result from the process.
10. A better system of ongoing institutional research, self-analysis, and self-improvement should be a major product of the process (p. 16).

Institutions that use self-study as part of program review commonly give units guidance about how to conduct self-study. Guidance can take the form of instruction or of advice. Arns and
Poland (1980a; 1980b) distinguished between self-study processes that are reactive and those that are self-generative. Contrasting the procedures for self-study at the University of Illinois with the procedure used in the Ohio State-Vermont process highlights this distinction. Departments in program review at Illinois must complete a uniform set of questionnaires during self-study. The set includes a departmental questionnaire, a survey of student majors, a rating of the department head's performance, and an expanded set of data forms from central information systems (Wilson, 1981b). Self-study committees at Ohio State and Vermont use a method of assessment that is program specific (Poland and Arns, 1978).

Research related to the issues of reactive vs. self-generative self-study processes tends to favor the latter. Smythe, et al. (1979) noticed that when self-study committees contribute to structuring review and to selecting the data used, their effectiveness was improved. Also, Hall (1978) found that an overreliance on forms and protocols had negative outcomes in the seven institutional review systems he studied. He observed that "limited communication occurred when standard protocols reduce the need for contact between evaluation units and the departments being investigated" (p. 22).

Another aspect of self-study processes concerns the span of time needed. Kells suggested 12-18 months is usually sufficient to complete the work of self-study (1980).
A central program review committee is also common among many program review mechanisms. A central program review committee typically has overall responsibility for conducting review; it may delegate that responsibility or conduct reviews itself. The central committee is frequently either an established university committee or a newly formed university committee (McMichael, 1973; Volkwein, 1977; Wilson, 1981a).

Atkin (1978) explained a dilemma that can arise when a central review committee represents traditional university values. He noted that university programs aligned with professional accreditation agencies can find themselves in an academic "catch 22" situation. "Internal evaluation," he said, "focuses upon the relationship between the units purpose and the purpose of the institution and professional accreditation focuses on professional training" (p. 5). The two purposes can conflict with each other.

A third common feature of program review mechanisms is the use of ad hoc review committees. Three types of ad hoc review committees are prevalent: internal review committees, external review committees, and mixed review committees.

Internal review committees are comprised of institutional faculty members who are not affiliated with the programs being reviewed. Internal review committees are usually established for each program in review and often report to a central review committee. Two primary responsibilities of internal review committees are evident. The
predominant one is evaluation. Most internal review committees evaluate the programs to which they are assigned. The program review systems at Pennsylvania State University, Florida State University, and the University of California at Los Angeles, for example, use internal review committees that are responsible for reporting the results of their evaluation to central program review committees (Harf, 1976; Johnson, 1974; Wright, 1976).

A less common responsibility of an internal review committee is coordination. It is often the case that when coordination is the primary responsibility of internal review committees, there is no central review committee. The Ohio State-Vermont process and the program review system used at the University of Minnesota include internal review committees with coordinating functions (Minnesota, 1974; Poland and Arns, 1978). Internal review committees provide a local perspective to the review process, a perspective different from the one provided in self-study.

External review committees provide yet another perspective. These committees are usually comprised of faculty peers from other universities who represent the discipline being reviewed. Their vantage point, therefore, is one of disciplinary expertise. The use of external peers in review and evaluation efforts is a well established tradition in American higher education, and many of the program review processes developed in recent years use them (e.g., the University of Minnesota, the Ohio State-Vermont process). However, a few program review systems use external reviewers selectively (e.g.,
The University of Illinois at Urbana-Champaign). One study reported that, although highly regarded as sources of information, external reviewers are expensive and seldom "objective" (Endgahl and Barak, 1980).

Stepsis (1978) expressed what is probably the conventional attitude toward internal and external review committees. He said:

that if an institution can afford both the time and the expense of two committees, one internal composed of members of related departments and the other from distinguished members of the discipline from other campuses, the impact and effectiveness of the review will be enhanced (p. 13).

Mixed review committees combine features of internal and external committees. Membership of mixed review committees varies. At the University of Nebraska-Lincoln, for example, what is called a "Review Team" includes external consultants, university faculty from outside the unit being reviewed, Office of Program Review staff members, Academic Planning Committee members, and alumni (Seagren and Bean, 1981).

It is obvious that committees are predominant task groups for program review mechanisms and that they are often arranged in a rather complex web of interlocking relationships. These relationships define the particular configuration of a institution's program review process.

Closure. A point made repeatedly in the literature is that program review systems ought to have a closure process to ensure that they yield results (Gentile, 1980; Kells, 1981; Wallhaus, 1981). Stepsis (1978) conveyed the importance of closure, indicating that
"the success and credibility of the evaluation process will depend a great deal on the precision and seriousness of the actions that follow review" (p. 14).

Some program review schemes reach closure when a final report is issued. These reports often carry no authority to implement recommendations. Program review at the University of Illinois relies heavily on the good will of decision makers to enact recommendations made by the central review committee (Smock, 1981b).

The University of Minnesota's closure mechanism also reports recommendations, but specifies agreements as well. Linck (Ohio, June 10, 1976) explained:

We have found that one of the most important phases in program review consists of the formal set of closure meetings with the dean of the college, the dean of the graduate school, and the academic vice president. It is at these meetings that we come to terms in relation to budgetary considerations with recommendations made by reviewers; it is also this part of the process that establishes the credibility of the entire process (p. 1).

Similarly, at the University of Michigan closure is "devoted to the formulation of a planning memorandum which would represent an understanding between the Academic Vice President and each dean with respect to objectives and plans of his/her college for five years into the future" (Ohio, December 20, 1976 p. 1).

The Ohio State-Vermont process also uses a memorandum of understanding for its closure mechanism. A memorandum of understanding is generated for each unit reviewed. It specifies actions completed during review, continuing actions, and planned
actions. Each party to review signs the memorandum, indicating a commitment to complete the specified actions. Closure also involves monitoring the implementation of memoranda of understanding (Arns and Poland, 1980a; 1980b).

Miscellaneous. Other issues and dimensions related to program review are apparent in the literature. Stepsis (1978) examined political aspects of program review, a topic also considered by Martorana and Kuhns (1978) and Wilson (1981a). Dressel (1981) considered the roles that values can play in program review, emphasizing that evaluation implies more than mere data collection.

Two contributions discuss the effects of using an academic program review system to evaluate administrative and service units. Smock (1981b) discussed program review at the University of Illinois and explained why the review of administrative and service units conducted by the central review committee was less than satisfactory. He wrote:

Just as departments may well have objected to being evaluated by people without academic credentials, so other units objected to a council composed solely of academics, even though the choice of task group members was appropriate to that unit. Also, an efficient process of arriving at suitable criteria coupled to adequate indicators and useful data was never developed. While it was possible to arrive at a common guide for the evaluation of all departments, the uniqueness of each administrative and service unit dictated a separate effort for each instance. The result was too lengthy a process: up to a year to design the evaluation, another to conduct it, and still another to consider and negotiate the results (p. 9).
Brown's (1981) work describes the Student Affairs Program Evaluation Process at the University of Nebraska-Lincoln. The design and the implementation of that process were patterned after the academic review process at Nebraska. Her investigation reported the perceptions of review participants. Three general weaknesses were identified: incomplete data on students, inability of evaluation teams to measure outcomes, and lack of comparability among reports. A number of strengths were also identified: opinions about programs were reinforced, esprit de corps was established among evaluation team members, a public relations value was evident, and acceptance and understanding of evaluation increased.

The advice given by Orleans (1979) about designing and conducting program review adequately summarizes this section. He maintained that the best review systems "balance candor with discretion, honesty with charity," and they account for the fact that program review "is at once a moral, political, and methodological problem" (p. 102). Achieving useful outcomes is another characteristic of effective program review systems.

Program Review Outcomes

In this final section of Chapter II, literature about program review outcomes is considered. Although few in number, these contributions represent the body of works to which this study is directly related.
Systematic research related to the identification of program review outcomes is rare (Greenberg, 1978; Seeley, 1981). The few existing studies can be divided into two broad categories for analytical purposes. One category contains studies with a multi-institutional focus; these studies identify program review outcomes of processes in use at several institutions. The second category contains writings about program review systems at individual institutions.

**Multi-Institutional Research.** Two studies by Poulton (1978a; 1978b) focus exclusively on planning and program review outcomes. The more general study of the two considers the impact of master planning, resource allocation techniques, and program review and evaluation on central administration functioning in five large universities (1978a). Four perceived outcomes of these activities were identified: information analysis improved; meaningful participation took place; communication improved; and a better basis for administrative action emerged.

The second study of the same five universities relates more specifically to program review outcomes (1978b). It describes characteristics of program review and discusses how various institutional actors use the results of review. Poulton made two general conclusions. First, program reviews benefit different university constituents differently, and, second, the administrative climate of the institution determines the use of program review.
Factors related to administrative climate were openness, collaborativeness, and rationality. Table 3 shows the specific program review outcomes identified.

Table 3

Perceived Outcomes of Program Review
Identified by Administrative Unit (Adapted from Poulton, 1978b)

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Program</th>
<th>School/College</th>
<th>University Admin.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Increased introspection</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Revised objectives for teaching and research</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Better organized and improved information</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>4. Better sense of goals, strengths, and deficiencies</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>5. Improved procedures and policies</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>6. Improved contact among members</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Improved resource justification and allocation</td>
<td>X</td>
<td></td>
<td>X (rare)</td>
</tr>
<tr>
<td>8. Potential increase in frustrations</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Major organizational changes</td>
<td>X (rare)</td>
<td>X</td>
<td>(occasionally)</td>
</tr>
</tbody>
</table>

Note. X = the unit perceived the corresponding outcome.
Poulton also identified what he called "secondary benefits" of program review. They include communication, clarification of goals and trends, tangible support for existing intuitions, and incremental reduction in uncertainty in decision making. He also observed that "the immediate, direct, and concrete impact of program review is rare. Major contributions come in longer term enhancement of the continuing operations of the university" (p. 16).

Another report also notes similar second order outcomes. Tritschler (1977), who coordinated a task force on self-assessment activities for State University of New York institutions, discussed the "side effects of self-assessment." He reported that the task force members "discovered things about themselves that they didn't realize, have come to some conclusions that they didn't expect, or have found some method so useful that they decided to try it in another area . . ." (p. 24).

Support for Poulton's (1978b) conclusion about the variable effects of program review outcomes is found in a recent study. Jany and Keller (1981) surveyed 268 faculty and administrators from four campuses in the University of Wisconsin system to determine their perceptions of program review. They found that program review has varying impact on administrators and faculty. Perceived positive outcomes of review were statistically correlated with degree of familiarity and involvement in the process.
Other studies are also germane to the subject of program review outcomes. Hall (1978) studied program review at seven institutions and concluded that program review rarely uncovered new problems. Instead, it placed old problems into the public arena and often facilitated administrative action. Smythe, et al., (1979) identified five outcomes of departmental review in medical schools. They include the articulation of department functions, the facilitation of change in leadership, a change in departmental objectives and priorities, a redefinition of institution wide strategies, and assistance helping administrators cope with institutional change. Engdahl and Barak (1980) studied program review in western colleges and universities and found general "institutional benefits" emerging from review. Among the benefits are improved planning, therapeutic value, and favorable impact on budget requests. Negative outcomes were also found; they are often political in nature. For example, legislators in one state overturned an institutional review decision to terminate a particular program.

Program discontinuance is another outcome of program review. Dougherty (1979a; 1979b; 1981) has studied program discontinuance extensively. He investigated ten universities and demonstrated that program review led to discontinuance even where no state agency involvement was present. He found that four institutions terminated programs on the basis of program review findings.
Institutional Literature. Literature about eleven institutions were analyzed to determine frequently discussed program review outcomes. A total of fifteen different outcomes were identified. The nine most frequently identified outcomes are listed in Table 4. Figures identifying the columns in Table 4 represent the institutions discussed in the writings (see Appendix A). In most of the cases, outcomes are discussed in general terms and few examples are used for explanation.

Table 4
A Summary of Program Review Outcomes at Eleven Universities

<table>
<thead>
<tr>
<th>Institutions</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Aids General Improvement</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Crystallizes Functions and Problems</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Aids Planning</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Increases Understanding of University</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Establishes an Evaluation Ethos</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Aids Resource Allocation</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Improves Communication</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Aids Decision Making</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Produces Secondary Effects</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4 continued:

Note. X = the university perceived the corresponding outcomes

1. Florida International University
2. Florida State University
3. Miami University
4. Ohio State University
5. Oklahoma State University
6. Pennsylvania State University
7. University of California-Berkeley
8. University of Illinois at Urbana-Champaign
9. University of Iowa
10. University of Michigan
11. University of Nebraska at Lincoln

Overall, the literature about program review outcomes lacks specificity. Information about either quantitative or qualitative dimensions of program review outcomes is rare. The literature shows that program review processes do produce outcomes and indicates that outcomes have variable effects, secondary benefits, and negative effects. Nonetheless, more detailed information about program review outcomes is needed. This study has attempted to generate systematic and detailed knowledge of program review outcomes.

Chapter II has presented a survey of relevant theoretical and practical literature related to program review. Chapter III contains a description of the methods used in this study.
Chapter III
RESEARCH METHODS

The previous chapter has presented an examination of theoretical and practical literature related to this study. This chapter provides a description of the methods that were used in the study. It is divided into six sections: introduction, constant comparative method, sample selection, procedure, other research methods, and limitations.

Introduction

The research study recorded in this dissertation has investigated the program review process at The Ohio State University and has stressed the identification of program review outcomes. Because the study emphasized the discovery of program review outcomes, a number of research methods were judged inappropriate. Research methods designed to test hypotheses or to verify preconceived theoretical models -- experimental, quasi-experimental, correlational, and survey methods -- were rejected (Conrad, 1975, p. 21). Instead, research methods designed to generate hypotheses or theoretical properties were considered more appropriate. Therefore, qualitative research methods were used in this study.
Filstead (1970) described the essential features of qualitative research methods:

Qualitative research methodology refers to those strategies . . . which allow the researcher to obtain first hand knowledge about the empirical social world. Qualitative methodology allows the researcher to "get close to the data" thereby developing the analytical, conceptual, and categorical components of explanation from the data itself -- rather than from the preconceived, rigidly structured, and highly quantified techniques that pigeonhole the empirical social world into operational definitions that the researcher has constructed (p. 6).

One technique in particular, the constant comparative method, served as the major research method in the study. Two other research methods, historical methods and participant observation, were used as well. These three methods are discussed in detail.

Constant Comparative Method

The constant comparative method is a data collection and a data analysis technique that is useful for the systematic generation of analytical categories. It has been used recently in research about higher education (Conrad, 1975; 1978; Newcombe and Conrad, 1981), and was most thoroughly elaborated by Glaser and Strauss (1967) and later by Glaser (1969). The method is generally concerned with:

- generating and plausibly suggesting (not provisionally testing) many properties and hypotheses about a general phenomenon, e.g., the distribution of services according to social value of clients. Some of these properties may be causes, but . . . others are conditions, consequences, dimensions, types, processes, etc. . . ." (1969, p. 219).
The constant comparative method is based on the principle of "data triangulation" (Patton, 1980). Data triangulation permits the use of multiple data sources in a study. Data sources can include observations, interviews, documents, articles, and books (Glaser, 1969). To determine the type of outcomes generated by Ohio State's program review process, two major sources of data were used: interviews and documents.

Conrad (1975) summarized the essential features of the constant comparative method:

... the constant comparative method is not built upon a predetermined design of data collection and analysis but represents a method of continually redesigning the research in light of emerging concepts and interrelationships among variables. Using a comparative technique that allows for similarities and later differences between groups, qualitative data are sought from a variety of sources to insure a rich comparative data base (p. 24-25).

The strength of the constant comparative method is its ability to ground the generation of theory or categories in a particularly social phenomenon.

There are four stages to the constant comparative method: 1) comparing incidents applicable to each category generated; 2) integrating categories and their properties; 3) delimitation; and 4) writing the results. First, the investigator codes each incident in the data base into as many categories of analysis as possible. As categories emerge or as data emerge to fit existing categories, the investigator begins to characterize the dimensions of those categories and their relationships to other categories. Also, while coding an incident to a category, it is compared with previous incidents coded
in the same category. For example, a program review participant may state that several courses were changed as a result of program review. The incident "course changes" is coded and then compared to incidents in all of the emerging categories. Finally, a determination is made and that incident is added to an appropriate category. In this way, a comparative process of category and incident verification occurs.

Second, the investigator integrates the categories and their properties. The analysis moves from comparison of incident with incident to comparison of the categories that resulted from the initial comparison of incidents. This stage further refines categories and their relationships to each other.

Third, delimitation occurs by reducing the number of categories generated in previous stages. Modifications are made for purposes of logical clarity, paring off non-relevant properties, integrating and elaborating details of properties into a major outline of interrelated categories, and, most important, reduction.

Reduction leads to a higher level, smaller set of concepts, based on discovering underlying uniformities in the original set of categories. The investigator begins the delimitation stage when new categories cease to emerge and when individual incidents no longer contribute to defining characteristics of properties. Glaser and Strauss (1967) refer to the condition where data incidents no longer aid in discovering new categories nor aid in refining existing ones as "theoretical saturation."
Fourth, writing the results occurs. Findings are presented in a discussion format or are listed as propositions. In this study the final stage involved describing the categories of program review outcomes and illustrating their properties (Chapter V). In addition, a number of conclusions based on these findings are presented in Chapter VI.

Sample Selection

According to the constant comparative method, the basic criterion governing the selection of a sample is theoretical or categorical relevance. Therefore, a sample can include a diverse set of data sources provided the set includes sources that are relevant to the phenomenon under investigation.

Selecting a sample for this study was a two step process. First, a program sample was selected. Second, an interview sample was selected from the program sample.

Programs were selected on the basis of their having been active in review for at least one full calendar year. In March 1980, 30 academic programs were involved in Ohio State's program review process. Twenty-seven of those programs had been in review for at least one year and thus constituted the program sample.

The constant comparative method also requires that differences among comparison groups in the sample be minimized and maximized. The fact that all twenty-seven programs in the selected program sample had been in review for at least one year minimized differences among them
by providing a common base line. Differences among them were maximized on two levels. First, programs were at different stages in the program review process, and, second, they represented different types of administrative units. Appendix B lists the program sample by their organizational characteristics.

The twenty-seven programs in the sample contained over 200 program review participants. Conducting interviews with the entire population of program review participants was unrealistic. Therefore, only participants who occupied leadership roles in the program review process were considered potential respondents. This decision was based on the assumption that these leaders, by virtue of their substantive involvement in program review, were more likely to be

Table 5
Distribution of Selected Interview Sample by Leadership Role in Program Review

<table>
<thead>
<tr>
<th>Role</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Study Committee Chairmen</td>
<td>27</td>
</tr>
<tr>
<td>Coordinating Committee Chairmen</td>
<td>27</td>
</tr>
<tr>
<td>Program Heads (Department Chairman, Directors of Schools, Institutes, or Centers)</td>
<td>8</td>
</tr>
<tr>
<td>College Deans</td>
<td>6</td>
</tr>
<tr>
<td>Central Administrators</td>
<td>4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>72</strong></td>
</tr>
</tbody>
</table>
better informed about the program review process than were other participants. The selected interview sample included 72 program review participants. Table 5 shows the distribution of the selected interview sample by leadership role.

Self-study and coordinating committee chairmen represented each program in the sample and comprised the major portion of the interview sample. Program heads and college deans were fewer in number and were selected on the basis of their substantive involvement in program review. These administrators were affiliated with programs in which there was at least one completed or nearly completed review. In this context, a completed review is one in which the memorandum of understanding has been signed (a memorandum of understanding is a closure document that contains a record of program review results). Also, four central administrators with overall responsibility for program review were among the selected interview sample. Table 6 on page 76 shows the selected program sample and the selected interview sample.

Procedure

To determine the type of outcomes generated by The Ohio State University program review process, interview data and documentary data were collected and analyzed according to the precepts of the constant comparative method. Interviews with program review participants and analyses of memoranda of understanding were the data sources.
Table 6
Distribution of Selected Program Sample and Selected Interview Sample

<table>
<thead>
<tr>
<th>Selected Program Sample N = 27</th>
<th>Selected Interview Sample N = 72</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Self-Study Chairman</td>
</tr>
<tr>
<td>1. Agronomy</td>
<td>X</td>
</tr>
<tr>
<td>2. Anatomy</td>
<td>X</td>
</tr>
<tr>
<td>3. Anthropology</td>
<td>X</td>
</tr>
<tr>
<td>4. Art Education</td>
<td>X</td>
</tr>
<tr>
<td>5. Atmospheric Sciences</td>
<td>X</td>
</tr>
<tr>
<td>6. Biochemistry(^1)</td>
<td>XXX</td>
</tr>
<tr>
<td>7. Botany</td>
<td>X</td>
</tr>
<tr>
<td>8. Communication</td>
<td>X</td>
</tr>
<tr>
<td>9. Dance</td>
<td>X</td>
</tr>
<tr>
<td>10. Economics</td>
<td>X</td>
</tr>
<tr>
<td>11. English</td>
<td>X</td>
</tr>
<tr>
<td>12. Geography</td>
<td>X</td>
</tr>
<tr>
<td>13. Geology and Mineralogy</td>
<td>X</td>
</tr>
<tr>
<td>14. History</td>
<td>X</td>
</tr>
<tr>
<td>15. Humanities Education</td>
<td>X</td>
</tr>
<tr>
<td>16. Institute of Polar Studies(^2)</td>
<td>X</td>
</tr>
<tr>
<td>17. Journal of Higher Education(^3)</td>
<td>X</td>
</tr>
<tr>
<td>18. Mathematics</td>
<td>X</td>
</tr>
<tr>
<td>19. Mershon Center</td>
<td>X</td>
</tr>
<tr>
<td>20. Metallurgical Engineering</td>
<td>X</td>
</tr>
<tr>
<td>21. Natural Resources</td>
<td>X</td>
</tr>
<tr>
<td>22. Pharmacy</td>
<td>X</td>
</tr>
<tr>
<td>23. Photography and Cinema</td>
<td>X</td>
</tr>
<tr>
<td>24. Public Administration</td>
<td>X</td>
</tr>
<tr>
<td>25. Social Work</td>
<td>X</td>
</tr>
<tr>
<td>26. Statistics</td>
<td>X</td>
</tr>
<tr>
<td>27. Veterinary Medicine</td>
<td>X</td>
</tr>
<tr>
<td>Totals</td>
<td>27</td>
</tr>
</tbody>
</table>

Notes:
1. The Biochemistry review combined three departments involved in biochemistry instruction and research. Three self-studies were conducted. A single coordinating committee is responsible for the review.
2. The Institute of Polar Studies review combined the Self-Study and Coordinating Committee into a single Comprehensive Committee.
3. The Journal of Higher Education review combined the self-study and Coordinating Committee into a single Comprehensive Committee.
Seventy-one of seventy-two program review participants in the selected interview sample responded affirmatively to a letter inviting them to participate in the study. The letter included a description of the purpose of the study, an explanation of involvement, a request for permission to tape record the interview, and a guarantee that responses would be held in confidence (see Appendix D). Attached to the letter was a memorandum signed by the two central administrators who are responsible for program review at the University. The memorandum introduced the investigator and endorsed the study (see Appendix C). After the letters were distributed, followup telephone calls were made to determine who would participate in the study and to receive permission to tape record interviews. Seventy of the seventy-one participants granted permission to tape record the interviews.

Focused interviews with seventy-one program review participants were held between September 1980 and February 1981. Interviews lasted between a half hour and one and a half hours and were transcribed. Focused interviews are interviews in which respondents know in advance what general aspects of a particular experience will be discussed. Merton, Fiske, and Kendall (cited in Kidder, 1979) described focused interview techniques:

First of all, the persons interviewed are known to have been involved in a particular situation: they have seen a film, heard a radio program, read a pamphlet, article or book, taken part in a psychological experiment or in an uncontrolled, but observed, social situation (for example, a political rally, a ritual or a riot). Secondly, the hypothetically significant elements, patterns, processes and total structure of this situation have been provisionally analyzed by the social
scientist. . . . On the basis of this analysis, he takes the third step of developing an interview guide, setting forth the major areas of inquiry. . . . Fourth and finally, the interview is focused on the subjective experiences of persons exposed to the pre-analyzed situation in an effort to ascertain their definitions of the situation (p. 188).

This study used the focused interview approach as a means of generating data about program review outcomes. The focused interview technique makes data collection somewhat systematic for each respondent and tends to optimize the use of time (Patton, 1980). Before each interview, respondents received an interview guide (see Appendix E). During the interviews, the investigator made detailed notes of the responses. Based on the notes, incidents were coded and analyzed. After the interview tapes were transcribed, the incidents were coded and analyzed again.

For an incident to finally be considered evidence, two criteria had to be satisfied. First, the investigator had to feel confident about the reliability of the individual respondents. In this study, attempts were made to enhance overall reliability by selecting well-informed leaders of the program review process and by ensuring an adequate mix of faculty and administrators who represented a variety of scholarly disciplines. Second, the investigator had to resolve conflicts over evidence. Interviewing at least two and sometimes as many as four participants from a particular program meant that conflicting evidence about incidents could surface. Depending upon the nature of the conflicting information and the credibility of the sources, it was necessary "to revise, qualify, or dismiss altogether a potential slice of empirical evidence" (Conrad, 1975, p. 29).
Program review documents were another source of data about program review outcomes. Memoranda of understanding from seven completed program reviews were analyzed.

Data from interviews and documents were coded into a variety of categories, categories were compared, and the comparisons led to integrating similar categories and differentiating dissimilar ones. Gradually the categories were delimited into a small but broad set of outcome categories. Chapter V contains a discussion of the program review outcome categories identified.

Other Research Methods

The constant comparative method was used to identify program review outcomes. Yet, for outcomes to be understood more fully they need to be seen in their proper context. Therefore, the study also includes an explanation of the origins of the program review process used at Ohio State and a description of how the system operates. To explain the origins of the program review process, historical research methods were used. To describe how the process works, participant observation research methods were used.

Historical Research Methods

Historical research relies heavily on primary source data. An ample amount of primary source data about the historical development of Ohio State's program review system was available to the
investigator. Primary source data were gathered from minutes of four relevant university committees, from documentation which accompanied those minutes, from interviews with administrators who helped to design the process, and from numerous memoranda and letters about program review. Minutes about program review were culled from official records of meetings of the Council on Academic Affairs, the Policy and Standards Committee, its Academic Review Subcommittee, and the Graduate Council. Attendant documents to the minutes were also analyzed. Documents usually consisted of general articles about program review or descriptions of program review processes at other universities. Interviews were conducted with the two administrators who were responsible for designing the review system and who were involved in its initial implementation. Finally, a variety of internal memoranda and letters pertinent to the development of program review at Ohio State were perused. Together these sources provided data which formed the basis for explaining the origins of program review at Ohio State.

It is common practice during historical research to assess the quality of sources. Therefore, sources were tested for their external and internal credibility. To subject sources to "external criticism" is to determine their validity (Kerlinger, 1964; Von Dalen, 1979). External criticism is concerned with the genuineness and textual integrity of sources. Admissability of evidence is usually determined by examining documents for, among other things, authenticity, authorship, and originality. It was not difficult to establish the validity of the documents used in this study. Most were original
documents or duplicate copies of originals. Minutes were taken directly from official records to which the investigator had unrestricted access.

"Internal criticism" of historical sources concerns the content of documents (Kerlinger, 1964; Van Dalen, 1979). Judging the credibility of statements contained in documents and the trustworthiness of data within the documents is of major importance to historical research. Documents were examined for, among other things, accuracy, author bias and motives, distortion, and contradiction. The documents from which the history of the review process was written appeared free from distortion.

Participant Observation Research Methods

To obtain data about how the program review process at Ohio State functions, participant observation methods were used. Patton (1980) explained the nature of participant observation methods:

Participant observation is an omnibus field strategy in that "it simultaneously combines document analysis, interviewing of respondents and informants, direct participation and observation, and introspection" (Denzin, 1978:183). . . . Thus, the participant observer is fully engaged in experiencing that setting through personal experiences, observations, and talking with other participants about what is happening (p. 127).

In contrast to techniques with more prescribed protocols, participant observation is a less formalized procedure.

The investigator relied on both personal experience with program review and on published and unpublished accounts of Ohio State's
review process as the basis for a detailed description of its operation. Personal experience with the process came through attending numerous program review meetings. In his staff support role as a graduate research associate, the investigator assisted administrators responsible for coordinating program review. Part of fulfilling that role involved attending a variety of program review meetings. Approximately 25 meetings in the 1980-81 academic year were attended. Notes made during these meetings constituted recorded perceptions about the functioning of the review process.

Data about the operation of the process were also gathered by inspecting published and unpublished literature related to the Ohio State review system (see Appendix F). Journal articles, book chapters, and scholarly presentations describe Ohio State's program review system. The process is also delineated in *The Guide for Program Reviewers* (1978), a handbook published by the University and given to each program review participant (see Appendix G).

Based on firsthand observation and participation, as well as information in existing publications, a detailed description of the process was written and is included in Chapter IV. The same chapter includes an explanation of the origins of the Ohio State program review process. Together they provide a context for understanding the outcomes generated during program review.
Limitations

There are two limitations to this study. One involves the case study approach. The other is related to the use of interviewing as a major data gathering technique. First, the decision to identify program review outcomes at Ohio State limits the generalizability of the findings. This study establishes no basis for generalizing these findings to other program review systems. Rather than creating general knowledge about program review, this study has generated deep knowledge about a particular way of conducting program review.

Second, using an interview format for data collection posed general limitations. Interview data are prone to reactive measurement effects. That is, a risk to the validity of responses lies in the awareness of research subjects that they are participating in scholarly research. Also, sampling imperfections of interviewing only participants with leadership roles could confound data (Webb, Campbell, Schwartz, Sechrest, 1966). The focused interview technique in particular can prevent important and salient topics from being discussed in the interview.

These methodological shortcomings have been minimized in two ways. First, reactive measurement effects of the interview data were offset somewhat by including document analysis in the data base. Documents are non-reactive data sources. Second, before the conclusion of each interview, respondents were given the opportunity to raise any program review issue. In this way, no issue related to program review was foreclosed from being discussed.
This chapter described the research methods that were used in the study. As a prelude to a discussion about program review outcomes, the following chapter provides an explanation of the origins of program review at Ohio State and a description of how the process operates.
Chapter IV

ORIGINS AND OPERATIONS

In the preceding chapter, the research methods used in this study were described. The first section of this chapter explains the historical development of The Ohio State University program review process; the second section describes how the process functions.

The Origins of Program Review

The purpose of this section is to trace the historical development of the program review process that was initiated at Ohio State in 1976. The value of a discussion about its origins is based on the belief that this historical knowledge can deepen an understanding of the process and its outcomes. The discussion is also valuable from the standpoint that it documents the development of an innovation in higher education, an area of research that has been neglected (Von Dalen, 1979, p. 376).

By focusing on the contributions various faculty members and administrators made to the development of the program review process, three general conclusions were evident: 1) the decision to create a new program review process was internally motivated; 2) the creation
of the new program review process was a collaborative venture; and 3) the design of the new program review process was influenced by program review systems at other institutions.

Internal evaluation of academic programs has been going on for a long time at Ohio State, particularly the evaluation of graduate programs (Arns, 1980). In the early seventies, however, a number of faculty and administrators became dissatisfied with University program review and evaluation practices then in use. Their dissatisfaction led to the development and then implementation of a new program review plan.

The development of the new plan relied on the work of many people but principally involved two groups of faculty and administrators who were affiliated with the Office of Academic Affairs and the Graduate School. These two groups worked independently, each planning separate program review procedures, and then together to create the system that is the subject of this investigation.

The Role of the Office of Academic Affairs

The Office of Academic Affairs, through its Council on Academic Affairs, began to consider the issue of program review in Autumn 1973. The Council on Academic Affairs at Ohio State is "responsible for making recommendations to University Senate concerning the educational and academic policies of the University" (Ohio, March, 1974, p. 12-40). It is composed of nine faculty and four student members; the provost or a designee serves as chairman.
At the initial Council on Academic Affairs meeting of the 1973-74 academic year, Professor Albert J. Kuhn, who was then Provost, outlined several issues for consideration in the year ahead. Program review was one of the issues raised. Kuhn's interest in program review grew, in part, from his awareness of work in this area at other Big Ten institutions, most notably at the University of Illinois. He learned of program review practices at these universities through his attendance at meetings of the Committee on Institutional Cooperation, a consortium of Big Ten institutions and the University of Chicago. In the early seventies, program review was often discussed at these meetings, giving Kuhn the opportunity to share ideas and concerns about program review with other chief academic officers from these institutions (Arns, 1980).

It is clear from the record of the Council on Academic Affairs meetings that members acknowledged the need for a program review system at Ohio State. Minutes of the October 3, 1973 meeting indicated the following:

... a mechanism is needed whereby all programs across the University are reviewed periodically, and some will be in line for an honest, searching review to see if they are meeting students' needs, professionals' needs, and if they are doing what their publicity indicates they are doing (Ohio, October 3, 1973).

In a subsequent meeting, a steering committee of council members was appointed to determine if the idea of program review was worth pursuing.
Later in the year, the steering committee reported that:

a University-wide, specific, undergraduate program review plan is needed. A plan must be developed for undergraduate colleges and later on for professional schools. Accreditation must be considered. Council should begin working on a plan as soon as possible (Ohio, January 23, 1974).

Before the academic year ended, council members had addressed specific elements of program review. The minutes of one meeting noted that members believed program elimination would be an inappropriate purpose of review. Instead, they argued for a process designed to help determine if programs are doing what they should be doing (Ohio, March 6, 1974).

Council considered many new issues the following year, but it also continued to discuss program review. In fact, for the duration of the 1974-75 academic year council had the benefit of a staff assistant with special knowledge of program review. D. H. Heldman, an American Council on Education Academic Fellow, was assigned to the Office of Academic Affairs for a one year internship. Heldman assisted with council's efforts to explore the issue of program review. He attended council meetings and wrote a number of program review reports. Heldman gathered a vast amount of information about program review practices at other institutions, information which provided a basis for many of council's deliberations.

One of Heldman's reports included a summary of council's program review discussions. It identified ten important program review topics: 1) a mechanism for initiation of review; 2) uniform criteria; 3) assurances of implementation; 4) overall opportunities for
college-level input; 5) the objectivity (or lack of it) of internal review committees; 6) influence on on-going reviews; 7) threat of program termination; 8) incentive for self-analysis; 9) involvement of faculty; and 10) involvement of students (Ohio, May 21, 1975).

In the 1975-76 academic year, a shift in administrative responsibility and a change in administrative personnel in the Office of Academic Affairs occurred. Professor George P. Crepeau, who was then an Associate Provost and who had chaired the Council on Academic Affairs, was assigned to other staff responsibilities. Professor Robert G. Arns, an Ohio State faculty member with previous campus administrative experience, was added to the provost's staff. Arns inherited the responsibility for developing a program review process and assumed the chairmanship of the Council on Academic Affairs. Under Arns, the council continued to study program review.

The 1975-76 academic year was also a biennium budget preparation year, a process that added impetus to program review activities in the Office of Academic Affairs. Based on his previous discussions with the council and on more recent talks with the Council of Deans, Provost Kuhn decided to link program review with fiscal planning. At an earlier council meeting that year, he stressed "the importance of program review in that the University will be depending on it in order to make critical budgetary decisions (Ohio, September 17, 1975). In a later memorandum to deans, he coupled program review with resource
allocation and underscored "the need for better ways of identifying a
unit's goals and evaluating the totality of its contributions" (Ohio,

The Provost's efforts notwithstanding, no formally established
program review procedure was in place by Spring 1976. That same
spring, however, Associate Provost Arns learned of the work going on
in the Graduate School relative to program review. He discovered
that, quite independently and from quite a different perspective, the
Policy and Standards Committee, a standing committee of the Graduate
Council, was working on the development of a new graduate program
review process.

The Role of the Graduate School

Between 1968 and 1974, the Policy and Standards Committee's
assignment was to engage in a continuing review of all graduate
programs with the hope that such reviews would contribute to the
improvement of graduate education throughout the University (Ohio,
November 25, 1974). Toward that end, all graduate programs were
scheduled to be reviewed by the Policy and Standards Committee over a
five year cycle, with followup reviews two years after each initial
review. With over 100 graduate programs, the likelihood of performing
useful reviews and of completing the cycle at the rate of 20 reviews
and 20 followup reviews per year was a considerable challenge, one
which ultimately went unmet. The magnitude and the logistics of the
schedule finally led to the suspension of that graduate program review system. The system simply collapsed under its own weight (Poland and Arns, 1978).

Because the system was so cumbersome and because of other shortcomings that are described below, Dean Jules B. LaPidus, Vice Provost for Research and Dean of the Graduate School, called a moratorium on graduate program review in January, 1975. He directed the Policy and Standards Committee to abandon its mission temporarily and charged it to reconceptualize and reformulate graduate program review. The minutes of one committee meeting recorded that:

Dean LaPidus asked the Committee to disregard the past history of the committee and to think about the kinds of things that they think are important for it to accomplish, and to set up ways to do these things. The Committee does not necessarily need to function the way it did previously . . . . Dean LaPidus stated that if this Committee could come up with a workable procedure for evaluating graduate programs, it would be the most worthwhile task it accomplished (Ohio, January 31, 1975).

The Policy and Standards Committee stopped reviewing graduate programs; its members began to think about better ways to conduct graduate program review.

To understand the nature of the abandoned review scheme, its procedures are quoted below:

1. Selection of the graduate program by the Policy and Standards Committee.

2. Notification to the department that such a review is contemplated.

3. The development of basic data by the Graduate School and submitted to the department for correction and completion.
4. Submission of materials to the Committee.

5. Interviews as directed by the Committee.

6. Site visit if requested by the Committee.

7. Discussion of reactions by the Committee and the preparation of a preliminary report. Further study may be made if necessary.

8. The preliminary report will be submitted to all those who participated in the review and to the Graduate Committee responsible for the program. Departmental comments may be appended to the final report at the discretion of the Policy and Standards Committee.

9. Final report developed by the Committee and submitted to the department, college, the Graduate Council, and the Provost's office.

10. After a period of time, some feedback will be requested relative to the implementation of the recommendations (Ohio, November 25, 1974).

Although many participants believed that their programs benefited little from these reviews, a few viewed them as salutary experiences. About the review of his graduate program, one department chairman wrote, "I feel our graduate program has been strengthened and improved by this rather lengthy process" (Ohio, May 13, 1976). Yet, many faculty perceived only marginal benefit from the reviews. Reflecting on his own experience, Arns said, "I remember being involved in graduate program reviews either as a witness or in some other fashion early on or a year before this [the new process]. Nothing much helped or happened as a consequence of those reviews, and I guess I didn't
feel a lot of confidence in them" (Arns, 1980). One Policy and Standards Committee member captured the mood of frustration felt by several faculty regarding that review process:

The more I have seen of these reviews the more confused and depressed I have become. I am convinced that the benefit/cost ratio of our efforts has not been greater than 0.1. Furthermore, I think it's more than a problem of not knowing how do to what we are doing; I don't even think we know what it is we are trying to achieve. Until we figure that out, the chances that our work will be worthwhile are virtually nil (Ohio, no date).

In addition to its unrealistic schedule, the abandoned review system had other problems, as Poland and Arns pointed out (1978). First, the process was not very flexible. By requiring all departments to complete the same set of questions, those questions, in effect, assumed that a standard set of issues applied to all programs. Second, interrelationships were ignored. Graduate programs were reviewed independent of related undergraduate programs and of other graduate programs too. Third, the process was a linear one. Reports passed up and down the administrative line diminishing the opportunity for substantive interaction between faculty and department, college, and central administrators. Fourth, the reviews were often superficial. The limited time allocated for conducting them prevented searching self-analysis. Finally, no provisions were made for implementing actions and recommendations. Commitments to act were achieved by moral suasion, if at all. A new review process was badly needed.
The manner in which the Policy and Standards Committee developed a new program review process was different from the approach used by the Council on Academic Affairs. It was noted above that the Council on Academic Affairs functioned as a sounding board on the issue of program review. Members learned about and reacted to program review practices elsewhere and often expressed their views about the kind of review system Ohio State needed. Essentially, council members provided input to central administrators. The Policy and Standards Committee, on the other hand, used a more grassroots approach. Faculty members were responsible for developing a new program review process.

In Autumn 1975, five faculty members were appointed to serve on an Academic Review Subcommittee of the Policy and Standards Committee. Associate Dean William Poland appointed the subcommittee members and led their deliberations. He charged them to develop a procedure for graduate program review and to submit the procedure to the Policy and Standards Committee for approval by Spring 1976.

The Academic Review Subcommittee members, together with Dean Poland and Miss Pat Wuichet, a Graduate School staff member, met weekly beginning on November 3, 1975. They approached their task in scholarly fashion by reviewing, analyzing, and discussing literature about program review. The range and volume of literature they considered were impressive. They read and discussed articles about goal analysis and goal identification, monographs and papers concerned with evaluation in higher education, and documents about program
review procedures at specific institutions. They had considerable descriptive material from the University of Illinois, the University of Michigan, the University of Minnesota, and Pennsylvania State University. By discussing the implications of the literature, by considering the positive and negative aspects of other review systems, and by analyzing what had gone wrong with the Graduate School's abandoned review system, the subcommittee members arrived at a set of principles for graduate program review, defined a pattern of review, and reaffirmed an objective for review (Ohio, May 26, 1976).

The record of the Academic Review Subcommittee meetings shows that four principles of review were accepted. The first principle was that graduate programs should not be reviewed separately from undergraduate programs (Ohio, November 13, 1975). Subcommittee members were convinced that "while our direct responsibility is only graduate programs, we will do a disservice if we ignore undergraduate and other elements of a program" (Ohio, February 12, 1976). The second principle was flexibility. The members agreed that graduate programs as different as classics and chemistry ought not be judged by the same criteria (Ohio, January 22, 1976). One member proposed that a flexible review process would provide the kind of adaptability lacking under the old system:

... we should seek to make the review process a part of an open, self-correcting system - one from which we, the reviewers, and they, the reviewed, can learn. In effect, I am proposing a rationale leading to review procedures that will be of a scholarly nature and have research potential built into the system (Ohio, February 17, 1976).
The third principle was that review should involve a program's faculty. One subcommittee member said, "we ought to take the faculty into consideration in creating a mutual understanding rather than dictating a position" (Ohio, January 22, 1976). The fourth principle was to make the process goal-oriented. The subcommittee's report envisioned a review procedure that would create a basis for defining goals and for relating them to activities (Ohio, May 20, 1976).

The subcommittee members proposed a basic pattern of review. They advocated a two-tiered pattern that used qualitative and quantitative criteria to categorize graduate programs into two groups. Group I programs would include programs of exceptional quality and of good quality. Group II programs would include programs needing improvement through intensive self-review, external review, or both (Ohio, May 20, 1976).

With respect to an objective for program review, the subcommittee reaffirmed the objective of the former review system: to improve the quality of graduate programs. Moreover, subcommittee members emphasized that there are many ways to improve programs. One member noted that "other things besides money might be needed to improve a program," and another commented "that sometimes a department could get stronger by getting smaller" (Ohio, February 19, 1976).

Aware of what the Graduate School had embarked upon, Arns organized a meeting with Poland in Spring 1976, and they compared observations about program review. Arns and Poland soon discovered that they held many common views about program review. Much of their concurrence was due, no doubt, to the fact that they and their
respective committees read and discussed some of the same program review literature. Subsequent meetings between them and further discussions with their committees led to the decision to combine efforts. Arns and Poland worked together to merge the concepts, thoughts, and principles inherent in the deliberations of their two committees. By Autumn 1976 they had developed a comprehensive program review system that was ready for pilot testing.

Prophetically, a letter written two years earlier by a Council on Academic Affairs member foreshadowed comprehensive program review at Ohio State. The letter said, "perhaps a representative from our own Graduate School should also be invited, so that we can learn how its program review system is working and how it could mesh with a University-wide system" (Ohio, December 17, 1974).

State Agency Involvement

Also in academic year 1976, developments at the Ohio Board of Regents gave "additional incentive" and a heightened sense of importance to Ohio State's new program review process (Ohio, 1978, p. 2). The Ohio Board of Regents, a nine-member coordinating board appointed by the Governor, is responsible for making studies and recommendations about public higher education in the state. Part of its statutory responsibility includes the development of master plans for state-assisted higher education. Early in 1977 the Board published Master Plan: 1976.
Unlike previous master plans, Master Plan: 1976 contained specific recommendations about institutional program review. In it was the recommendation that "each state institution of higher education begin a review of its programs on a five-year cycle and report its findings to the Board" (1977, p. 38). The chapter devoted to graduate education contained a more elaborate program review recommendation:

... each institution will be asked to submit to the Board its formal review procedure within one year. In addition, programs with very small enrollments will be identified and the universities asked to report on these programs on an individual basis. At the Ph.D. level, outside consultants may be called to assist in review procedures (p. 60).

Consequently, the report meant that Ohio State's already established program review process was imbued with added importance.

Further, it is important to emphasize that the Board of Regents' mandate for program review occurred after Ohio State's new review system was in place. This fact was made clear to the Board of Regents Chairman, James A. Norton, in a letter written by Harold Enarson, then President of Ohio State:

Ohio State was already deeply immersed in the study of program review when the Regents' concern with the matter came to our attention a little over a year ago. Indeed, large scale review of graduate programs at this institution began in earnest in 1968, and was interrupted only temporarily as we worked to overcome the major logistical barriers posed by the necessity of giving thoughtful and searching review to 104 academic departments offering graduate degrees (Ohio, October 27, 1977).
Clearly, the program review process at Ohio State was internally motivated.

In addition to showing that program review at Ohio State was internally motivated, this historical account demonstrates that the process was developed collaboratively and made use of review efforts at other universities. Collaboration was evident, first, in the way the Office of Academic Affairs and the Graduate School depended on faculty input and, second, in the way that Arns and Poland synthesized and integrated that input and their own knowledge of program review. Also, the Ohio State program review process was strongly influenced by review systems at other universities, particularly those at Illinois, Michigan, and Minnesota. Thus, the new comprehensive program review process resulted from systematic efforts "at clear-headed borrowing, retailloring, and tinkering -- the major attributes of effective innovation" (Ohio, January 29, 1979).

It was against this background that a new program review process was launched at Ohio State at the beginning of Autumn Quarter 1976. Several program reviews were started that year, and more were initiated the following year. Experience from these reviews led to a few minor revisions and refinements in the process, but its essential characteristics and major phases have remained intact.
The following section contains a detailed description of The Ohio State University program review process. It begins by presenting a general, map-like view of the entire review process. After the process is broadly described, its conceptual characteristics are explained. Following that explanation is a more detailed account of the procedures for review. Thus, this section explicates a complex social phenomenon by moving from the general to the particular.

An Overview of Program Review at Ohio State

Program review at Ohio State is a comprehensive, faculty-based process. The process is comprehensive because all aspects of academic programs are reviewed, teaching, research, and service activities and graduate and undergraduate components alike. It is faculty-based because responsibility for review resides with faculty members, not administrators. The purpose of program review is simply, solely, and explicitly program improvement (Ohio, 1978).

There are commonly four parties to each review: the program itself (faculty, students, and program administrators), the college(s) to which the program reports, the Graduate School, and the Office of Academic Affairs.

For every program review, a self-study committee composed of program faculty and, occasionally, students is formed. The self-study committee generates a report based upon a searching examination of the
program, giving particular attention to quality, value, and effective use of resources. This report forms the background for a site visit by external reviewers.

The external review committee visits the campus after having received the self-study report. It meets with faculty, students, and administrators and submits a report of its own about the program's strengths and weaknesses and with recommendations for improvement. The members of the committee are senior faculty from other universities or accomplished practitioners from professions.

The self-study report and the external review report are instrumental to:

the development of a plan of action, called a memorandum of understanding, which sets forth the agreements of all parties with respect to what will be done over a given period, typically five years, who will do it, and how it will be known to be completed. The memorandum of understanding serves as a basis for checking subsequent progress and is updated and monitored by the coordinating committee (Arns and Poland, 1980b, p. 280).

The organizational key to the review process is the coordinating committee. Each program review has its own coordinating committee composed of senior faculty members from inside the university but from outside the program being reviewed. Its members assist self-study committees plan their investigation, manage the external review proceedings, keep lines of communication open, and bring the process to closure (Ohio, 1978, p. 4).
Nine characteristics form the conceptual bases of program review at Ohio State and undergird the entire process. They include flexibility, program definition, self-study, parties to the review, openness, feedback, external review, peer coordination, and closure (Arns and Poland, 1980a, 1980b).

**Flexibility.** Program review at Ohio State was designed so that individual reviews could accommodate to unique aspects of particular programs. This type of flexibility led to the rejection of a single review protocol and of standard forms to be filled out. Instead, the review process was constructed with the recognition "that no two programs are alike." In this way it is possible "to tailor individual reviews to the nature of the program" (Arns and Poland, 1980a, p. 278-9).

**Program Definition.** Program is defined as "a coherent set of academic activities with specified goals" (Ohio, 1978, p. 3). This broad definition makes it possible for a variety of academic program configurations to be the focus of review. For example,

... a program may be a traditional department, or parallel components of several departments, or coherent sets of departments, or an entire college or some other activity -- such as the University's Basic Education Requirement -- which involves many departments and colleges (Ohio, 1978, p. 3).

A flexible definition of program assumes that its boundaries are permeable.
Self-Study. Program review has encouraged:

- a form of self-study that is self-generative rather than reactive. The purposes of self-study are (1) to increase the consciousness of program participants concerning what they are doing and what they ought to be doing; and (2) to provide a basis for later steps in the process by communicating, via a written report, facts about the program and the perception of the participants (Arns and Poland, 1980a, p. 279).

The self-study committee members are responsible for writing that report, "in which the emphasis ought not be on data but on what the data mean" (Arns and Poland, 1980a, p. 279). The size and composition of the self-study committee depends on the program under study.

An important feature of the self-study committee is its independence. It may make use of whatever resources are necessary and appropriate to complete its task. The committee is free to draw its own conclusions and is not obliged to seek consensus on issues or recommendations. Throughout its investigation, the program faculty, students, and alumni are involved in ways that foster a searching investigation. As a result, self-studies proceed differently for different units of review.

Parties to the Review. The concept of parties to review underscores interdependence among academic programs and administrative units within the university. This characteristic, in the way that it is applied, distinguishes Ohio State's program review process from many others. Arns and Poland (1980a) explained:
We have insisted that the process of review includes not only those within the program but all who are in some way responsible for it. A typical review of a department involves four parties: the program, the college dean, the chief academic officer of the university, and the graduate dean (p. 279).

The concept of parties to review is critical to program review at Ohio State.

Poland (1981a) used graphic illustrations to depict the concept of parties to review. Figure 1 on page 105 is an adaptation of two of those illustrations. To clarify the meaning of parties to review, Poland explained that:

The Ladder (in Figure 1) is a . . . good representation of the worst aspects of most review or evaluation systems we studied. In review, it represents a standard set of questions, based on a standard set of data, couched as a standard set of forms to be filled out. These forms start at the top of the Ladder and filter down to the chairman -- one may never know whether they reach the faculty beyond a request for up-to-date vitae. The completed forms are passed back up the Ladder and then those at the bottom wait to hear what the people at the top of the Ladder have decided. . . .

[In contrast] . . . our programs . . ., viewed comprehensively, exist in a triangular relationship rather than a ladder-like administrative support structure. The Office of Academic Affairs, the Graduate School, and the colleges exist because academic programs exist, and their combined purpose is to provide flexible support for these programs. In the triangle, the lines represent all lines of support, responsibility, and communication as they relate to that program and its relation to these supporting administrative units (p. 2-3).
Figure 1

A schematic representation of the concept of parties to review and its contrast to an administrative hierarchy.1

Therefore, "the program is the focus of the review, but in every program review, each party -- the program, the college, the Graduate School, and the Office of Academic Affairs -- may find something to improve" (Poland, 1981a, p. 3).

Openness. Mims (1978) discussed the dimensions of choice that emerge when considering the design and implementation of program review. One dimension she listed was "confidentiality vs. openness." The designers of Ohio State's program review process opted for openness. A concern for openness is seen in the expression that "each of the parties is expected to be candid in communication concerning the program with other parties, coordinating committees, and external reviewers" (Arns and Poland, 1980a, p. 279). Moreover, the process is designed to permit any party to ask questions or state propositions, to make all documents available to all of the parties, and to have open committee selection procedures (Ohio, 1978; Arns and Poland, 1980b).

Feedback. Feedback has been encouraged throughout the program review process by inviting transactions among the parties and by offering other academic support units an opportunity to provide input. Specified feedback loops occur during review. When a report is drafted, comments are made by all parties and distributed to all parties. As a result, reports may be revised, with successive iterations continuing until an acceptable report emerges. In addition, academic support units are notified when each program begins
review; they are requested to submit questions, provide data, or raise pertinent issues. The following supervisors of academic support units are routinely notified:

-- the Vice Provost for Arts and Sciences,
-- the Vice Provost for Continuing Education,
-- the Vice Provost for Minority Affairs,
-- the Vice President for Regional Campuses,
-- the Vice President for Health Sciences,
-- the Director of University Libraries,
-- the University Honors Director,
-- the Office of Campus Planning Director,
-- the Ohio State University Research Foundation Director, and
-- the Instruction and Research Computer Center Director.

External Review. A common characteristic of program review and evaluation in higher education is peer review. The Ohio State review process provides for external review by disciplinary or professional peers. In most reviews, experts from outside the university make a site visit and prepare a report. The external review stage normally follows self-study.

Peer Coordination. Unlike program reviews that are conducted by either a central faculty committee (Wilson, 1981b) or an administrative office staff (Freeman, 1981), Ohio State's program reviews are conducted by faculty and coordinated by separate groups of faculty peers. Each review has its own coordinating committee, a name derived from its principal task. Coordinating committees are responsible for managing reviews and have five specific tasks:
They (1) work with the Self-Study Committee to outline the self-study issues; (2) work with all parties toward a mutually acceptable design for external review; (3) design additional studies when needed to reconcile differences between the self study report and the report of the external reviewers; (4) foster open communication and feedback throughout; and (5) see that the process is brought to closure and that changes are implemented (Arns and Poland, 1980a, p. 280).

**Closure.** Ultimately, the success of a review depends on the results it produces. Therefore, it is important that a review process has provisions for meaningful results to occur. Ohio State's process includes a mechanism for closure designed to insure that results do occur.

Closure is reached when the parties to a review agree on a course of action and embody their agreements in a document called the memorandum of understanding. The memorandum of understanding spells out a mutual understanding of the objectives to be pursued by programs, "the steps to be taken to achieve those objectives, and the time frame and estimated costs for completing them" (Draft Memorandum of Understanding, 1). Accomplishments completed during the course of program review are also recorded in the memorandum of understanding. Above all, the document serves as a basis for measuring subsequent progress.
Figure 2 on page 110 illustrates how Ohio State's program review system works. Poland (1981a) has explained that

in this Figure, the rectangles represent work done by the Self-Study and External Review Committees. Circles represent the Coordinating Committee. The lines with arrows show the direction of flow. The triangles carry the relational meaning [depicted in Figure 1]. . .The diamonds represent the four parties, with all lines of communication open, planning together in light of the results of the review (p. 7).

The three columns delineate the three major phases of review: self-study, external review, and closure.

Before the self-study committee and the coordinating committee meet to plan for self-study (upper left-hand box of Figure 2), a number of preparation activities take place. For the most part, these preparation activities are coordinated by a program review staff.

The program review system is coordinated by a staff of four persons. They include the associate provost for instruction, the associate dean of the Graduate School who chairs the Policy and Standards Committee, the program review administrator, and a graduate research associate. The program review administrator is the only staff member assigned full time to program review. He serves as the common contact point for all programs in review and performs valuable services in fulfilling that role.

Most programs are selected for review by college deans who propose programs to the Office of Academic Affairs. Deans create their own criteria for selecting programs. They may propose a program based on
A schematic representation of the sequence of events in the program review process at Ohio State.¹

an impending accreditation review; they may use the occasion of a new department chairman appointment to select a program for review, or they may use other methods. One dean proposes programs in alphabetical order. Regardless, nominations are normally accepted so long as the total number of reviews in the system remains at a manageable number.

With the acceptance of a new program for review, other preparation activities are triggered. One of those activities is an orientation session. The program review staff meets with program participants to set the context for the review procedure, to discuss benefits, expectations, and procedures for review, and to answer questions.

Committee selections are another preparation activity. College deans appoint a self-study committee for each review. Normally, they make recommendations and ask the appropriate program head for nominations before making the official appointment. The provost appoints each coordinating committee, after receiving the recommendations of the program, the college dean, and the Graduate School. The principle of preemptory challenge applies during the selection of a coordinating committee. All coordinating committee members must be accepted unconditionally by all parties. Membership typically includes four to six faculty members whose combined characteristics are knowledge of the unit in review but no formal affiliation with the unit, university statesman qualities, and unfamiliarity with the unit of review. The latter characteristic permits the innocent but sometimes seminal question.
Once the college dean appoints the self-study committee and the provost appoints the coordinating committee, the program review staff meets with their members. Special features of the review, logistical support, a timetable for review, and other procedural matters are discussed at these meetings. Also, it is common at this meeting to provide the self-study and the coordinating committee members time to begin their planning. This planning is depicted in the upper left-hand rectangle of Figure 2.

Self-Study Phase. The left-hand column of Figure 2 shows that after plans for self-study have been laid, the self-study committee begins its investigation. In short, the committee collects, analyzes, and explains relevant data about its program. To assist programs with self-examination, a section of the Guide for Program Reviewers (Ohio, 1978) contains questions for possible consideration. About these questions, Poland (1981a) has noted:

> We do not represent them to be all possible questions, nor do we prejudge their pertinence to a particular review. We present them as a useful checklist and as a device to generate thought (p. 10).

In addition, the Guide (Ohio, 1978) presents, "in the form of a logical progression," nine fundamental questions "about programs and their components. . ." that should be answered:

1. Who are we?
2. What do we do?
3. How much does it cost?
4. Why do we do it?
5. What do we seek to accomplish?
6. How does what we do relate to why we do it?
7. What difference does it make whether we do it or not?
8. How well do we do it?
9. What is needed to make what we do more valuable? to help us do it better (p. 2)?

Once a draft self-study report exists, the coordinating committee makes sure that the parties to review and the program's participants receive the draft. Furthermore, the coordinating committee requests written comments from the parties. Comments are shared with all parties, sometimes in raw form; sometimes the coordinating committee prepares and distributes a codified summary of the comments (Poland, 1981a, p. 8).

Reading a draft self-study report and making comments about it is an activity that may be reiterated, as Poland (1981a) pointed out:

On the basis of these comments and with the counsel of its Coordinating Committee, the Self-Study Committee may do more work, may revise the Self-Study draft, or may ask for editorial assistance. There may be no or several modification cycles.

... it is never the case that anyone has to approve the Self-Study Report formally. Rather, at some point, it is agreed that the document has laid the basis for:
1. Defining the characteristics needed by the External Review Committee;
2. The selection of that Committee
3. Setting its schedule; and
4. Having the Coordinating Committee prepare a letter of charge to the External Reviewers (p. 8).
External Review Phase. The middle column of Figure 2 depicts the external review phase of program review. Including an external review phase in the program review process rests on the premise that independent observers can identify strengths and weaknesses and can evaluate projected courses of actions from a different perspective than program participants. Further, it is believed that their perspective can contribute to program improvement.

The external review committee is composed of three or more scholars or practitioners. Among the external reviewers are persons knowledgeable in their discipline as well as at least one person familiar with the role of similar programs in institutions like Ohio State. If the program has a professional dimension, one or more of the external reviewers may come from the ranks of practitioners. External reviewers are appointed by the provost upon the recommendation of the other parties, and all members must be accepted by all parties without reservation.

The purpose of the external review committee is to conduct an investigation of the issues identified in the letter of charge proposed by the coordinating committee. Along with the letter, they are sent the self-study report, with attendant comments, appropriate bulletins and other University publications, and a copy of the Guide for Program Reviewers. The coordinating committee plans the external review and serves as host to the reviewers, and the external reviewers make their report to the coordinating committee.
At an initial meeting, external reviewers are welcomed to campus and are given an opportunity to ask questions about the review system and their role. During their visit, they meet with the appropriate persons, and at the end of their visit there is a closure meeting with the coordinating committee. Once the coordinating committee receives the external reviewers' report, it is distributed to the program faculty and to all parties for written comments.

**Closure Phase.** Receipt of the external review report and the attendant comments signifies the beginning of the closure phase of review. The right-hand column of Figure 2 illustrates the closure phase. The major task in this phase is to generate and to sign a memorandum of understanding. A signed memorandum of understanding "represents a multi-lateral commitment on the part of the parties to review." Emerging from the substance of previous review documents, it is an "evolutionary agreement subject to change as events unfold, but only with the consent of all parties directly involved in such changes" (Draft Memorandum of Understanding, 1).

Preparation of the memorandum of understanding involves the parties reaching agreement on the nature of the issues to be included in the document and on the appropriate actions that are needed to address those issues. Reaching this agreement entails the parties meeting together to discuss the issues and actions. Based on these discussions, a draft memorandum of understanding is written and cycled
through iterations where modifications may be made. Finally, the document is signed by all parties with a copy going to each member of the program faculty.

The memorandum of understanding is bound along with the self-study report, the external review report, and other necessary documents such as addenda to any of the reports generated during the review or responses to any of the documents from parties to the review that bear on the memorandum. Copies are then distributed: one for each party to the review (four in most cases) and one for the coordinating committee chairman, who is responsible for conducting the followup review. The copies kept in the Office of Academic Affairs and in the Graduate School are available on request for reading.

Although signing a memorandum of understanding signifies that the major task of the closure phase of review is complete, the review process itself is not completed. Periodically, the coordinating committee will monitor progress and make a report to all parties. The memorandum of understanding serves as the basis for measuring progress. Once a followup report has been issued, the parties reconvene to determine what, if any, new recommendations should be implemented and to decide which, if any, phases of the review process should be repeated. It is not anticipated that the entire process will need to be reiterated.
To summarize, program review at Ohio State has three major phases: self-study, external review, and closure. The process is non-linear and involves complex transactions between interlocking committees. Above all, it is managed by faculty members.

This chapter has included historical and operational accounts of program review at Ohio State. The historical antecedents of the process were presented to demonstrate that it was internally motivated, collaboratively designed, and externally influenced. The operations of the process were described in order to clarify the intricacy and complexity of the process. In so doing, a context for understanding program review outcomes more fully has been set. Chapter V considers the outcomes of program review at Ohio State.
Chapter V

OUTCOMES

The previous chapter contained historical and procedural descriptions of Ohio State's program review process. This chapter presents a discussion of program review outcomes. In so doing, it addresses the central research questions of this study. Namely, what are the outcomes of program review at Ohio State and how can they be categorized?

Interview data and documentary data were used in this study to identify program review outcomes of The Ohio State University program review process. Interviews with 71 program review participants and content analysis of action items in seven signed memoranda of understanding were conducted. Action items are the statements in memoranda of understanding that specify past, present, or future actions of one or more parties to review. Data generated from the transcribed interviews and from the document analyses were subjected to the constant comparative method, a technique for systematically collecting, verifying, organizing, and analyzing data.

Table 7 on page 120 lists the eight outcome categories that were identified in the study. An outcome category is an abstract construct that represents a number of related program review outcomes. Program review outcomes are the results of program review that affect actors
and/or activities at Ohio State. For example, the outcome category "Curricular Outcomes" contains several different but related program review outcomes, all of which are associated with the subject of curriculum -- courses, examination procedures, program requirements, and pedagogy. Each of the eight outcome categories is discussed quantitatively, using frequency data, and qualitatively, using illustrations from the interview and the documentary data.

In addition to their qualitative differences, program review outcomes were distinguished on the basis of prime beneficiary. Although the idea of distinguishing program review outcomes based on the concept of prime beneficiary is new, the concept itself is not, having been applied previously to organizational theory. Blau and Scott (1960) have advanced a classification scheme of formal organizations based on cui bono -- who benefits. Their system classifies types of organizations according to whether their owners, employees, customers, or society is the prime beneficiary of organizational operations.

Their scheme has been adapted in this study in order to differentiate between two types of program review outcomes: primary outcomes and secondary outcomes. **Primary outcomes** are program review outcomes that predominantly benefit the program community (actors and/or activities inside programs). **Secondary outcomes** are program review outcomes that predominantly benefit the university community (actors/or and activities outside programs). Five of the eight outcome categories identified were classified as primary outcomes (Table 7, I. 1-5); the remaining three were classified as secondary
Table 7
Identification of Outcomes in 27 Program Reviews at The Ohio State University

<table>
<thead>
<tr>
<th>OUTCOME CATEGORIES</th>
<th>Number and percentage of program review participants (N = 71) who identified at least one outcome in the corresponding category</th>
<th>Distribution of action items in seven(7) signed Memoranda of Understanding into program review outcome categories (N = 231)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A.</td>
<td>B.</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>I. PRIMARY OUTCOMES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Operational Outcomes</td>
<td>36</td>
<td>51</td>
</tr>
<tr>
<td>2. Program Knowledge Outcomes</td>
<td>34</td>
<td>48</td>
</tr>
<tr>
<td>3. Curricular Outcomes</td>
<td>30</td>
<td>42</td>
</tr>
<tr>
<td>4. Human Resources Outcomes</td>
<td>27</td>
<td>38</td>
</tr>
<tr>
<td>5. Physical Resources Outcomes</td>
<td>17</td>
<td>24</td>
</tr>
<tr>
<td>II. SECONDARY OUTCOMES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Personal Outcomes</td>
<td>31</td>
<td>44</td>
</tr>
<tr>
<td>2. University Knowledge Outcomes</td>
<td>28</td>
<td>39</td>
</tr>
<tr>
<td>3. Communication Outcomes</td>
<td>18</td>
<td>25</td>
</tr>
</tbody>
</table>

Notes: -- = not applicable
percentages rounded to the nearest integer
outcomes (Table 7, II. 1-3). Primary outcomes are discussed first; they include operational outcomes, program knowledge outcomes, curricular outcomes, human resources outcomes, and physical resources outcomes.

Primary Outcome Categories

**Operational Outcomes.** Column A in Table 7 shows that 51 per cent (36 of 71) of those interviewed identified operational outcomes. Column B indicates that 21 per cent (48 of 221) of the action items in seven signed memoranda of understanding were classified as operational outcomes.

Operational outcomes denote the ways in which programs changed their managerial functions. They comprise the results of program review related to program administration and program governance. Establishing guidelines for graduate students who hold departmental appointments and reforming a program's committee structure are examples of operational outcomes.

Several operational outcomes concerned modifications of existing policies or practices. An example is a statement made by one department chairman (Note: All interviews were conducted in confidence; program reviewers are identified by cohort groups and code number):

> Well, I think one item that came to a head was the procedure for, well it was a mixture but was tied up with personnel matters. We have an elected
personnel committee and those procedures were never followed, and it seemed to me, through self-study, we had to discuss this. There were ideas brought up by different faculty in a general meeting . . . the issue became a total faculty meeting item and various recommendations were made, and as a result we adopted these procedures (Program Head, 46, p. 63).

An item from a memorandum of understanding also illustrates a change that took place in program governance (Note: Although program review documents are not confidential, they are identified by type of document and code number to prevent associating them with interviews which were conducted in confidence): "The appointed Advisory Committee to the Chairman has been replaced by an elected Executive Committee consisting of one member from each faculty rank" (Memorandum of Understanding, 2, p. 3).

In addition to revising existing program operations, a number of operational outcomes called for establishing new administrative procedures. A case in point was the creation of an advisory board in one program. Its memorandum of understanding stipulates that:

The Director, with the advice and counsel of the Faculty Advisory Committee, will invite distinguished academicians and prominent practitioners to join the University President (ex officio) as members . . . . The Committee, which will be formed during the academic year 1980-81, will meet at least once a year (Memorandum of Understanding, 5, p. 3-4).

Operational outcomes were identified by more than half of the persons interviewed and account for over one-sixth of the action items found in the seven signed memoranda of understanding.
Program Knowledge Outcomes. Program knowledge outcomes were the second most frequently identified outcome category. Slightly less than half -- 48 per cent (34 of 71) -- of the respondents perceived program knowledge outcomes. Program knowledge outcomes signify an improved understanding of a program in review. They reflect perceptions among program review participants regarding what they learned about programs. Because of their abstract nature, program knowledge outcomes are not appropriate items to include in a memorandum of understanding, a document intended to contain only statements about concrete particular things. Table 7 shows that program knowledge outcomes were not applicable to the seven signed memoranda of understanding.

Three types of program knowledge outcomes were prevalent. One type concerned the perception that the program review process had confirmed what participants already knew about their programs. Another type involved the perception that new knowledge about programs was discovered. A third type of program knowledge outcome was the perception that, during program review, more information and better information about programs had been obtained. Also, it is interesting to note that participants from all cohort groups -- self-study chairmen, coordinating committee chairmen, program heads, college deans, and central administrators -- were able to identify program knowledge outcomes.
The following six excerpts are taken either directly from self-study reports or from transcribed interviews with self-study committee chairmen and are representative of program knowledge outcomes:

1) Many members of the faculty were convinced that they were underpaid in respect to others of the same rank in the Department, in the University, and in other departments . . . . From the data, it can be concluded that there is no variation between [comparison groups]. The departmental averages are less than the University averages, which is a cause of concern, and are in the mid-range for salaries of other [similar] departments . . . . (Self-Study, 1, p. 90);

2) We all met for two years and we studied the department's programs in considerable depth and breadth; I'm sure we all emerged better informed about how the department's doing its work (Self-Study Chairman, 51, p. 3);

3) . . . meetings which were held to discuss field issues were sometimes the first time the field as a group had met. This is unfortunate. Personnel (graduate students included) affiliated with each field should be encouraged to meet (formally and informally) on a regular basis (at least once a year) to discuss issues of mutual concern . . . . (Self-Study Report, 2, p. A18);

4) I had not really known exactly how productive the faculty was . . . (Self-Study Chairman, 51, p. 3);

5) I felt like maybe for the first time we had a good hand on what the strengths of the department were (Self-Study Chairman, 20, p. 17); and

6) Several of the faculty learned things they did not know existed about the way that things operated, the way in which things were done. They expressed on a number of occasions, "Oh, I didn't know that was the way it was done." In part this was due to the newness of some faculty, but also there were some senior faculty here who seemed to be surprised when they discovered that this was the process . . . (Program Head, 46, p. 1-2).
Program reviewers outside the programs in review also identified program knowledge outcomes. Two central administrators spoke directly to the benefits of knowing more about programs:

1) I think we are making decisions in this office that one might have taken longer to make or perhaps would not have made, because the program review process has done two things: it helped us to understand needs, and it helps us to legitimate those needs (Central Administrator, 50, p. 3); and

2) I think simply that the self-knowledge that eventuates from the reviews is probably the most important thing that happens. When I say that only the people inside the program know about the program that doesn't necessarily mean that the people inside do know about it. They haven't thought about it. And inevitably we run into people in every review who say, "We just never really thought about it, we've been doing this for years . . ." (Central Administrator, 68, p. 3-4)

Similarly, coordinating committee chairmen spoke of program knowledge outcomes:

1) A few other people learned something about the department, and the other people that do learn something about the department are the Coordinating Committee members, some individuals of the Provost's office, and some individuals of the Graduate School, and for better or worse they learn something about the department just beyond who its chairman is and where the main office of the department is. I guess that's perhaps one of the best aspects of it [program review] is that you actually do force other people to have to learn something about other departments (Coordinating Committee Chairman, 14, p. 9); and

2) I think I have learned a great deal about the college. I've learned a great deal about the way a medical unit functions, what kinds of problems come with the sources of their support, how they differ from medical colleges . . . All of these things I've learned and learned with profit . . . (Coordinating Committee Chairman, 4, p. 6).
Not all participants claimed to have gained new knowledge about programs. For example, one dean asserted:

I know my college inside out. I know everything that goes on. I mean I have been here for . . . years and there isn't a chairman in the college who could pull anything over my eyes, and so I don't learn anything new (College Dean, 29, p. 11).

Nevertheless, it is apparent from most of these statements that program knowledge outcomes did contribute new and useful knowledge about programs.

Curricular Outcomes. Column A of Table 7 demonstrates that curricular outcomes were identified by 42 per cent (30 of 71) of the program review participants interviewed in the study. Column B indicates that curricular outcomes represented the largest number of action items listed in the seven signed memoranda of understanding -- 35 per cent (81 of 231) of the action items.

Curricular outcomes constitute modifications to and/or new developments in a program's curriculum. Typically, changes occurred in courses, degree programs, academic requirements, or instructional practices. Program reviewers identified a host of curricular outcomes; examples include the initiation of a new area of study, the development of a Ph.D. proposal, the addition of courses, the adjustment of program requirements, a planned reduction of areas of specialization, and the elimination of an academic division.

Major curricular revision occurred in a few cases. For instance, one program head said that program review had precipitated substantial change in his program:
Divisions changed appreciably because they defined programs for the first time in extension, in research, and in teaching, and they defined projects they were pursuing within the programs. In the case of teaching, they identified the options and suboptions and the courses that fit into these categories (Program Head, 26, p. 5).

A self-study chairman said that significant changes were made in his department's undergraduate curriculum as a result of program review and that there had been no substantive examination of the undergraduate course of study for twelve years (Self-Study Chairman, 64). In another case, a program head stated that most of the graduate program reforms instituted in his department arose out of program review (Program Head, 47).

Yet, most of the curricular outcomes that were identified were less encompassing. Examples of minor curricular adjustments are evident in these quotations from four memoranda of understanding:

1) [the document specifies that two professors] will review [an area of the] curriculum and make recommendations to the Department Chairman for course revisions and course additions by the end of the Spring Quarter of 1980. Formal proposals for course additions and changes will be developed and will be forwarded to appropriate Departmental and college curricula committees by the end of Fall Quarter, 1981 (Memorandum of Understanding, 1, p. 2);

2) Undergraduate 200- to 400-Level Courses

Issue: The External Review Committee (ERR, p. 3) suggested that . . . majors need more 200-level courses designed for them.

Action A: The Department Chairman will assign one or more faculty members with proper expertise to develop a new 200-level course . . . (Memorandum of Understanding, 2, p. 5);
3) As part of its curricular review of 1982-83, the Undergraduate Program Committee of the Department will examine 200-level courses with the intent to determine whether such courses are appropriate for the level and/or for BER-LAC credit (Memorandum of Understanding, 4, p. 5); and

4) Beginning in FY81, [the program] will establish four . . . service courses to meet the needs of non-majors at OSU . . . (Memorandum of Understanding, 6, p. 8).

These examples illustrate that both revolutionary and evolutionary curricular change occurred during program review.

Human Resources Outcomes. Human resources outcomes also emerged as a primary outcome category. Table 7 shows that 38 per cent (27 of 71) of the program review participants that were interviewed identified human resources outcomes and shows that 24 per cent (56 of 231) of the action items in seven signed memoranda of understanding were human resources outcomes.

Human resources outcomes represent program review results that concern the effective use of a program's personnel. Most often, human resources outcomes affected faculty members, but program administrators, students, technical staff, and alumni were also affected. Different examples of human resources outcomes were the addition of staff, a provision for more faculty released time, the implementation of a faculty mentor system, and a shift in teaching loads.

\[^1\]BER-LAC is an acronym which stands for Basic Education Requirement and the Liberal Arts Core. The Basic Education Requirement refers to the University minimum general education requirement. The Liberal Arts Core is a more extensive general education requirement for students in the Colleges of the Arts and Sciences.
A large number of human resources outcomes pertained to faculty members. Two examples show how human resources outcomes changed the distribution of faculty members within programs. One program received full funding for a new tenure track position at the assistant professor level, and another program received additional funding sufficient to upgrade a faculty professor position vacancy to the rank of full professor.

Not all faculty-related human resources outcomes involved adding staff, however. In one program, a faculty mentor program was reinstated. That program now pairs senior faculty with junior faculty to assist the younger professors with their professional development. Personal interviews with junior faculty members on a quarterly basis and a quarterly visitation program for all faculty were initiated in another program. The program head of that program commented:

We have established a quarterly course visitation program by the department chairman in which I schedule a visit to each course at least once each quarter and sit in on the actual class as it's presented and then meet informally with the instructor afterwards and pass on some of my views and comments and suggestions, but we did initiate that, again as a result of program review and there has been a very positive reaction from the faculty on this (Program Head, 55, p. 10).

Human Resources outcomes also affected students in general and graduate associates in particular. One program that traditionally had not used graduate associates for undergraduate instruction now

---

2Graduate Associates are graduate students who earn monthly stipends in exchange for teaching, research, or administrative services.
employs them as teaching associates as a result of what they learned during program review. Another program, too, reaffirmed a commitment to train its graduate teaching associates prior to their first quarter of teaching duties. Its Memorandum of Understanding states:

Within two years, restore the summer training program for new graduate teaching associates. A three week training program for 25 GTAs on stipend would cost in the neighborhood of $7,500 (Memorandum of Understanding, 3, p. 9).

It is interesting to note that although several human resources outcomes involved additional financial costs, many of them did not (see Table 10 on page 148 for data about funding).

Physical Resources Outcomes. The physical resources outcome category was the fifth and final primary outcome category identified in the study. Table 7 shows that 24 per cent (17 of 71) of those interviewed identified physical resources outcomes and that 12 per cent (27 of 231) of the action items in seven signed memorandum of understanding were physical resources outcomes.

Physical resources outcomes represent modifications to or acquisitions of material goods and/or physical structures used by academic programs. Two types of physical resources outcomes were evident. One type included outcomes related to facility needs of programs. Facilities ranged from office space for faculty members to a fish pond for research in fisheries management. The other major
type of physical resources outcomes concerned the equipment needs of programs. Equipment varied from library acquisitions for historical research to optical equipment for science laboratories.

Physical resources outcomes related to facilities were noted in a number of reviews. One coordinating committee chairman mentioned that before program review reached closure, space for a small library had been reserved and that bids for a research facility had been requested (Coordinating Committee Chairman, 38, p. 4). The words of a program head from a different program are also pertinent in this regard:

Second is housing. The [program] is physically located in four separate entities ... That is an awkward arrangement for an entity that's supposed to be promoting interdisciplinary interaction and the University perceives that problem, I think, sharper than ever before, and it recognizes it as a problem. Well, people have been making that statement for a long time. Now there's some recognition about that and I'm told, although I wasn't present in the meeting of the Office of Campus Planning and Space Utilization, the Provost volunteered that the program's multiple location is something that needs to be attended to. I'm sure she couldn't have articulated that without the Memorandum of Understanding (Program Head, 32, p. 9).

Two other examples illustrate the variety of physical resources outcomes pertaining to facilities. First, one program head acknowledged:

We also got, I forget what it was now, something like $40,000 or $45,000 to renovate a classroom that we got downstairs and to change it to a teaching lab for the program. Again, it's not a great deal of money in terms of the administration but it will be a very big factor in what we can do (Program Head, 37, p. 5).
Second, consolidation of space was the subject of a statement in the memorandum of understanding for another program: "High priority," it says, "will be given to enlarging and improving the physical facilities of the Department and to consolidating those facilities in a single, centrally located University building" (Memorandum of Understanding, 7, p. 11).

Equipment related outcomes comprise another major type of physical resources outcomes. One self-study chairman explained how, through program review, the department considered a number of issues, including equipment needs. He commented as follows:

So we did use the program review to look at some of the things we might like to reorganize when we move [to a new location] and one was that we ought to have a word processor in the department to decrease the amount of typing manuscripts and some of the record keeping and that kind of thing, so we have used some of the financial resources allocated to the new building to buy a word processor, and it's going to be delivered next week (Self-Study Chairman, 34, p. 4).

More typical were the equipment-related outcomes found in two memoranda of understanding:

1) Within one year of signing this Memorandum, the Department will prepare a prioritized, justified list of its most urgent teaching equipment needs and will relate this to course enrollments. In addition to cost, the list will specify such information as whether the equipment is intended to replace worn out and unreliable items currently being heavily used by students, to supplement an insufficient number of items available to students, to allow the Department to teach new procedures, or to illustrate in the laboratory what has only been taught theoretically in the classroom (Memorandum of Understanding, 2, p. 9-10); and
2) In 1981-1982, the Provost will provide one-time funds of $6,000 for purchasing recent imprint titles requested by the [program] (Memorandum of Understanding, 4, p. 12).

Secondary Outcome Categories

Personal Outcomes. Table 7 records that 44 per cent (31 of 71) participants identified personal outcomes. No personal outcomes are listed in Column B, however, because they are inappropriate for inclusion in a memorandum of understanding. Personal outcomes represent the effects of program review on an individual or on relationships between individuals. Personal outcomes tended to cluster in four areas: personal and professional relationships, distribution of a person's time, frustration level, and professional development.

Program review presented participants with opportunities to observe administrative behavior. One central administrator, for example, explained that program review permitted him to observe the administrative behavior of college deans. He remarked:

... in my position, I tend to see deans and other administrators who work for me in terms of a set of processes through which we interact. So I see a dean's standards and the quality of his evaluations through, for example, the budgeting process and its promotion and tenure process. Those are two very fundamental ways. I see a little of his entrepreneurship or their quality, I see very often very little of his values with regard to program, curriculum, as intellectual leadership, etc. I found that program review provides me with a marvelous way of observing those and it's been very
helpful to me in evaluating how deans behave, not only concerning those issues, but their own interaction and way of interacting with faculty and department chairmen. What I find is that deans who have problems with feedback and giving it freely; people who have problems with the role of other parties in a review, these are symptomatic of problems in their relationships with departments. So it provides an early warning for me (Central Administrator, 3, p.7).

A college dean spoke of how the process has affected his relationship with a department chairman:

There is no question about it, since we speak frankly, that my relationship with the chairman of one department after this thing is over will be deeply disturbed, and I cannot deal with a great confidence or have great confidence in a person who ... tries to hold the college over a barrel to get this and to get that (College Dean, 29, p. 4).

Other effects or relationships were noted. A coordinating committee chairman speculated that in the review he is responsible for it may prove beneficial to the self-study chairman to have been observed by his dean. More concrete, however, is the observation of a coordinating committee chairman who subsequently was appointed department chairman:

I think one of the things probably that the dean looked at in my favor [regarding becoming chairman of the department] was that I had this experience and had a lot of high recommendations from people in the administration and program review. He [the Dean] mentioned that to me (Coordinating Committee Chairman, 30, p. 6).

Being involved in program review also appears to have shaped personal attitudes. A coordinating committee chairman said that program review gave him "a higher regard for particular
administrators" (Coordinating Committee Chairman, 22, p. 16). One self-study chairman articulated a sentiment expressed by other program reviewers, namely, that administrators were helpful and did not interfere. The following passage conveys his view:

I think that I've been impressed all along with the willingness of Academic Affairs to meddle as little as possible in the process, and I've said all along that they want the faculty to feel that it is a review of programs by faculty and external reviewers. I'm pretty much convinced that they have honored that commitment, they have participated from the standpoint of coordination and advice. I haven't found a lot of arm twisting except in differences of procedure and it ought to be done this way or that way. But in terms of their influencing outcomes or content of self-study or external review, I think they have stuck to their word of staying out of it pretty much and letting the review take place among faculty and the self-study committee in the department (Self-Study Chairman, 20, p. 12).

Another kind of personal outcome was the bringing together of university personnel who had not known each other before. Two statements represent this type of personal outcome:

1) There was this other more personal thing of getting to know a little better some people with whom I had even no acquaintance or just a hello kind of acquaintance. . . I, for example, wrote a part of our report that was on teaching. It turns out, and this I hadn't known, but one coordinating committee member for many years has taken a particular interest in the problem of teaching sciences. I guess he's known nationally for that. I didn't know any of this and he not only made useful suggestions, but he and I had a couple of very interesting talks (Program Head, 42, p. 8); and

2) I thought it was a broadening experience. It gave me the opportunity to interact with some persons in other academic disciplines. It gave me an
opportunity to learn something about central administration and how it functions, its concerns. It sure was enlightening in that I guess it reinforced the fact that other academic faculties have similar problems, and it gave me some insight that would help in our own self-assessment and evaluation of my own academic area . . . (Coordinating Committee Chairman, 11, p. 3).

Another personal outcome was that program review consumed more time than was initially anticipated by many who participated. For some this became a problem. One self-study committee chairman gave the process "low marks for consumption of faculty time" (Self-Study Chairman, 20, p. 16). Another felt that "it used a lot of valuable time" (Self-Study Chairman, 24, p. 1). Perhaps the strongest point about time consumption was that program review "has reinforced a general impressions I already held: that central administration tends to view faculty time as a free good" (Coordinating Committee Chairman, 32, p. 4).

A few participants mentioned that increased frustration was a personal outcome of program review. One central administrator was frustrated because he could not keep pace with the reading of reports. "I can't process it [the information], and I want to, so it creates frustration and conflict (Central Administrator, 50, p. 7). A self-study chairman also commented on his frustration. He said, "It frustrates me because I don't think I have quite the orientation to our department or our department's philosophy that the mainstream of our department seems to reflect" (Self-Study Chairman, 17, p. 2).
A final type of personal outcome was labeled professional development. Coordinating committee chairmen in particular expressed the view that their involvement with program review helped with their own university responsibilities. Four quotations typify what is meant by professional development outcomes:

1) One of the major payoffs or one of the major things that I saw for me is that it would have a direct payoff to me as a faculty member and as chairman of the department. It allowed me to have to get to know and work with top level administrators, the provost's office, the Graduate School, and another college. I see that as a plus to me particularly in administering the department, you not only get to know those people, they get to know you and it either comes out to be positive or probably neutral or negative depending upon how you perform (Coordinating Committee Chairman, 67, p. 3);

2) I've been able to function better on the Research Foundation and in a foundation I serve on in Boston and a couple of foundation panels in Washington with the National Endowment for Humanities. I've been able to function better because of the wider view (Coordinating Committee Chairman, 38, p. 10);

3) [My interdisciplinary program review] made me far more sensitive to the situations my faculty might get into in terms of things like the spinal cord research center, the comprehensive cancer center, the biomedical sciences program in engineering and things like that . . . a faculty member's contributions to those things that might not show up on departmental ledgers and quarterly activity reports that equate time to dollar are very important both to faculty members' development and to the University (Coordinating Committee Chairman, 64, p. 2); and

4) Now all of this [experience with program review], I think is making me a better member of the graduate faculty in the University, which I think is a prime factor in the whole process and one certainly that we had as a goal. The graduate faculty is the only
comprehensive faculty in the University and yet it tends to be very compartmentalized. This process, if it ever smooths itself out, is one which really can make us University faculty members as opposed to disciplinary in our orientation and parochial in our limitation. I think I've gained a lot (Coordinating Committee Chairman, 4, p. 7).

In addition to personal outcomes, university knowledge outcomes were identified.

University Knowledge Outcomes. Table 7 demonstrates that 39 percent (28 of 71) of the participants identified university knowledge outcomes. No university knowledge outcomes are recorded in Column B because they are inappropriate for inclusion in memoranda of understanding.

University knowledge outcomes refer to the incidental intelligence participants gained about university operations. They were reflected in statements made by program review participants which indicate that something new about the university had been learned. One central administrator provided a good definition of university knowledge outcomes. He said they "help to make it possible for people in the program to see the university and their relationship to the university in a different light" (Central Administrator, 44, p. 5).

A prototypical university knowledge outcome is represented in the following quotation:

I have developed a better sense of the Graduate School perspective, their concern for quality educational values. That is something I would not have assumed from the normal rumors that go around about what administration is like. It gave me I think a far better understanding of the role of the
Office of Academic Affairs, the kind of concerns they have, that again quality is a serious consideration (Coordinating Committee Chairman, 61, p. 15).

One self-study committee chairman admitted surprise over discovering a serious concern for teaching among administrators. He said that during program review meetings it was:

illuminating to see how the deans and provosts thought, and what I found surprising was the emphasis that the Graduate School Dean and the College Dean placed on teaching. I sort of thought they wanted us to publish more to give our department national reputation (Self-Study Chairman, 51, p. 4).

Central administrators considered university knowledge outcomes important. One of them believed that the faculty of the University, particularly those appointed to coordinating committees, get to see more about how the University operates than they had before (Central Administrator, 44). Another central administrator maintained that "the development of a broader understanding about the nature of the University throughout the entire institution, through the work of the coordinating committee, is the one hidden agenda, if there is one, in the whole process . . ." (Central Administrator, 3, p. 5).

University knowledge outcomes are similar to program knowledge outcomes. Like program knowledge outcomes, they signify improved understanding.

Communication Outcomes. The communication outcome category was the third type of secondary outcome category identified. Table 7 shows that 25 per cent (18 of 71) of the respondents named
communication outcomes that eight per cent (19 of 231) of the action items in seven signed memoranda of understanding were communication outcomes.

Communication outcomes refer to the results of review that either affected feedback or formal ties among programs. Communication outcomes about feedback concerned the transmission of information. Communication outcomes about formal ties among programs referred to interprogram arrangements stipulated in several memoranda of understanding.

A number of program review participants noted that program review improved general feedback. The view of one self-study chairman illustrates the perception that communication between individual departments and central administration had been improved. He commented:

Well, I think there's a failure at this university, there's a failure in communication between individual departments and central administration. I think that's a function of the organizational nature of this university. You've got to go through the appropriate people of our organization before you get the message across. I think review kind of short circuits that to some degree and that's useful. I mean you do have people in Academic Affairs and in the Graduate School involved directly with the department. . . . So it kind of short circuits the problem of line organization in the university and I think that's useful (Self-Study Chairman, 7, p. 5).

On a more formal level, several action items in memoranda of understanding call for interprogram linkages. One memorandum of understanding specifies curricular planning activities between the
program and nursing, nutrition, education, and linguistics. Also, the memorandum of understanding in another program stipulates the establishment of two university-wide committees.

To summarize, the discussion above concentrated on the eight program review outcome categories that were identified in this study. Furthermore, it has classified outcomes into primary and secondary outcomes. Primary outcomes were operational outcomes, program knowledge outcomes, curricular outcomes, human resources outcomes, and physical outcomes. Secondary outcomes were personal outcomes, university knowledge outcomes, and communication outcomes.

Table 8 on page 142 shows the distribution of program review outcomes identified by the cohort groups in the interview sample. Summing the numbers by columns yields the total number of outcomes identified in each program review outcome category. Summing the numbers across rows yields the total number outcomes identified by each cohort group.

Table 8 is noteworthy for two reasons. First it shows a numerical relationship between primary and secondary outcomes. Second, it contains data about the outcome categories that were identified solely by participants.

Table 8 demonstrates that 221 outcomes were identified. Furthermore, 65 per cent of them (144 of 221) were classified as primary outcomes, and 35 per cent of them (77 of 221) as secondary outcomes. Consequently, program communities were prime beneficiaries
Table 8

Distribution of Program Review Outcome Categories Identified by Cohort Groups

<table>
<thead>
<tr>
<th>COHORT</th>
<th>N</th>
<th>operational</th>
<th>program knowledge</th>
<th>curricular</th>
<th>human resources</th>
<th>physical resources</th>
<th>sub total</th>
<th>personal</th>
<th>university knowledge</th>
<th>communic.</th>
<th>sub total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Study Committee Chairman</td>
<td>26</td>
<td>12</td>
<td>14</td>
<td>12</td>
<td>9</td>
<td>3</td>
<td>50</td>
<td>10</td>
<td>8</td>
<td>4</td>
<td>22</td>
<td>72</td>
</tr>
<tr>
<td>Coordinating Committee Chairman</td>
<td>27</td>
<td>9</td>
<td>9</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>37</td>
<td>14</td>
<td>12</td>
<td>5</td>
<td>31</td>
<td>68</td>
</tr>
<tr>
<td>Program Heads</td>
<td>9</td>
<td>7</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>25</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>9</td>
<td>34</td>
</tr>
<tr>
<td>College Deans</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>12</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>7</td>
<td>19</td>
</tr>
<tr>
<td>Central Administrators</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>20</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>8</td>
<td>28</td>
</tr>
<tr>
<td>Totals</td>
<td>71</td>
<td>36</td>
<td>34</td>
<td>30</td>
<td>27</td>
<td>17</td>
<td>144</td>
<td>31</td>
<td>28</td>
<td>18</td>
<td>77</td>
<td>221</td>
</tr>
</tbody>
</table>

Note: percentages rounded to the nearest integer
of about two thirds of the program review outcomes; the university community was the prime beneficiary of slightly more than one third of the program review outcomes.

Information from both Table 7 and Table 8 is used to analyze the outcome categories that were identified both by participants and in program review documents (hereafter referred to as documented outcomes) vs. the outcome categories that were identified solely by participants (hereafter referred to as communicated outcomes). Table 7 shows that five of the eight outcome categories can be classified as documented outcome categories: operational outcomes, curricular outcomes, human resources outcomes, physical resources outcomes, and communication outcomes. Three outcome categories can be classified as communicated outcome categories as well: program knowledge outcomes, personal outcomes, and university knowledge outcomes.

Thus, a distinction can be drawn between documented outcome categories and communicated outcome categories. The data in Table 8 show that documented outcome categories contain 58 per cent (128 of 221) of the outcomes identified by the program review participants and that communicated outcome categories contained 42 per cent (93 of 221) of the outcomes identified by program review participants. These findings indicate that a large proportion of the outcomes identified in the study emerged solely from interview data.

Table 9 on page 145 presents another view of program review outcomes. In this table, the 27 programs in the sample are clustered into three groups representing different phases in the review
process. Seven programs had signed their memoranda of understanding; ten programs were preparing their memoranda, and ten programs were in the self-study phase of review. For each of these programs, the outcomes that were identified by one or more program review participants are noted with an X. Therefore, this table displays the outcome categories that were identified in each program review.

Two observations deserve attention. One is that program review outcomes occur at each stage of the process. Underscoring the fact that outcomes can occur in early phases of review, one program head cogently observed:

... many of the charges that have already taken place have taken place not because there's been a formal directive down through the program review chain, but the fact that we just had the review and it spurred somebody along knowing that here's an area that we need to make some changes in and then make them without any formal directive and I think that's probably a very hidden but a very powerful result of the whole program review process (Program Head, 55, p. 11).

Secondly, Table 9 shows a logical upward progression in the number of categories identified based on proximity to closure. Totals for the seven programs with signed memoranda of understanding exceed those for the ten programs in the memoranda of understanding preparation phase (45 to 39). Similarly, totals for the programs in the preparation stage exceed those for programs in self-study (39 to 27).

Table 10 on page 148 focuses on the documentary data and presents an analysis of the action items in the seven signed memoranda of understanding. In this table, action items are distinguished based on
Table 9
Outcome Categories Identified by Program and Phase of Review
(X = identified by one or more respondents)

<table>
<thead>
<tr>
<th>PROGRAM REVIEW OUTCOME CATEGORIES</th>
<th>Total no. of cat. id.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>operational</td>
</tr>
<tr>
<td>Signed Memo of Understanding:</td>
<td></td>
</tr>
<tr>
<td>Natural Resources</td>
<td>X</td>
</tr>
<tr>
<td>English</td>
<td>X</td>
</tr>
<tr>
<td>Botany</td>
<td>X</td>
</tr>
<tr>
<td>Anthropology</td>
<td>X</td>
</tr>
<tr>
<td>History</td>
<td>X</td>
</tr>
<tr>
<td>Marshall Center</td>
<td>X</td>
</tr>
<tr>
<td>Statistics</td>
<td>X</td>
</tr>
<tr>
<td>Preparing Memo of Underst.,:</td>
<td></td>
</tr>
<tr>
<td>Metallurgical Engineering</td>
<td>X</td>
</tr>
<tr>
<td>Veterinary Medicine</td>
<td>X</td>
</tr>
<tr>
<td>Agronomy</td>
<td>X</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>X</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>X</td>
</tr>
<tr>
<td>Institute for Polar Studies</td>
<td>X</td>
</tr>
<tr>
<td>Atmospheric Sciences</td>
<td>X</td>
</tr>
<tr>
<td>Journal of Higher Education</td>
<td>X</td>
</tr>
<tr>
<td>Mathematics</td>
<td>X</td>
</tr>
<tr>
<td>Humanities Education</td>
<td>X</td>
</tr>
<tr>
<td>Self Study:</td>
<td></td>
</tr>
<tr>
<td>Public Administration</td>
<td>X</td>
</tr>
<tr>
<td>Art Education</td>
<td>X</td>
</tr>
<tr>
<td>Geography</td>
<td>X</td>
</tr>
<tr>
<td>Photography and Cinema</td>
<td>X</td>
</tr>
<tr>
<td>Geology and Mineralogy</td>
<td>X</td>
</tr>
<tr>
<td>Dance</td>
<td>X</td>
</tr>
<tr>
<td>Economics</td>
<td>X</td>
</tr>
<tr>
<td>Social Work</td>
<td>X</td>
</tr>
<tr>
<td>Anatomy</td>
<td>X</td>
</tr>
<tr>
<td>Communication</td>
<td></td>
</tr>
</tbody>
</table>
Timing and funding. Timing refers to whether an action item was completed, continuing, or planned at the time memoranda of understanding were signed. Examples of each are listed below:

1. Completed Action -- "Beginning in the 1978-79 academic year the teaching load for individual faculty members was reduced from six to five courses a year" (Memorandum of Understanding, 1, p. 9).

2) Continuing Action -- "The [program] will continue to work with the [two other programs] to continue the interdisciplinary graduate seminar . . . during 1981-82. The Graduate School will again be asked to help support this seminar" (Memorandum of Understanding, 2, p. 7).

3) Planned Action -- "During 1981-82, The Department will review the doctoral fields it offers, with the intent of developing concrete proposals that address" [reduction of a number of those fields] (Memorandum of Understanding, 4, p. 9).

Funding refers to whether an action item required additional financial support from outside the program for its implementation. With that definition, action items were distinguished based on "Funding Required" and "Funding Not Required."

Analyzing action items on the basis of timing and funding reveals several notable points. First, the majority of action items -- 74 per cent -- are items concerning future activities (total percentage of continuing and planned action items). Second, the completed action items show that 26 per cent of the total were accomplished before reviews reached closure. Third, 72 per cent of the action items did
not require funding and 28 per cent did. Hence, these data show that programs accomplished actions before completing review and found much to change that did not require additional funding.

Table 10 also presents actions items according to their level of party involvement. The following definitions pertain to the "Parties Involved" section of Table 10:

1) **Program only** -- Actions stipulated in a memorandum of understanding that involve only the program in review.

2) **Program + 1 Party** -- Actions stipulated in a memorandum of understanding that involve the program in review and one other party.

3) **Program + 2 Parties** -- Actions stipulated in a memorandum of understanding that involve the program in review and two other parties.

4) **Program + 3 Parties** -- Actions stipulated in a memorandum of understanding that explicitly involve the program in review and three other parties.

5) **1 Party, exclusive of the Program** -- Actions stipulated in a memorandum of understanding that explicitly involve a single party exclusive of the program in review.

What is interesting about this analysis is that the overwhelming majority of action items -- 62 per cent -- require only the initiative of individual programs. Programs accomplished a considerable amount on their own. Moreover, as was pointed out above, programs accomplished many of these action without additional funds.
### Table 10

Distribution of Action Items (N = 195) in Seven (7) Signed Memoranda of Understanding by Percent

| TIMING  | FUNDING |  |  |  |  |  |  |
|---------|---------|-----------------|-----------------|-----------------|-----------------|-----------------|
|         | Required | Not Required   | Total           |                  |                  |                  |
|         | N        | %              | N               | %               | N               | %               |
| Completed | 8        | 4              | 42              | 22              | 50              | 26              |
| Continuing | 8        | 4              | 24              | 12              | 32              | 16              |
| Planned  | 39       | 20             | 74              | 38              | 113             | 58              |
| TOTAL    | 55       | 28             | 140             | 72              | 195             | 100             |

Parties Involved

<table>
<thead>
<tr>
<th>Parties Involved</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Program Only</td>
<td>121</td>
<td>62</td>
</tr>
<tr>
<td>2. Program + 1 Party</td>
<td>56</td>
<td>29</td>
</tr>
<tr>
<td>3. Program + 2 Parties</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>4. Program + 3 Parties</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5. 1 Party, exclusive of the Program</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

Note: percentages rounded to the nearest integer
This chapter discussed the eight program review outcomes identified in this study. It presented quantitative and qualitative data about program review outcomes. The next chapter summarizes the study, presents conclusions, and discusses considerations for future research.
Chapter VI
SUMMATION AND CONCLUSIONS

It is clear that a considerable number of the nation's colleges and universities are seriously involved in academic program review activities today. However, only limited information about the outcomes of those activities exists (Seeley, 1981). This study has focused on the identification of program review outcomes. The program review process at The Ohio State University was selected for investigation.

Summation

This study used qualitative research methods to examine systematically three research questions:

(1) What are the origins of the program review process at The Ohio State University?
(2) How does the program review process at The Ohio State University function?
(3) What are the outcomes of the program review process at The Ohio State University?
The study has presented historical and procedural explanations of program review at Ohio State in order to set the appropriate context for identifying and for understanding outcomes.

Data for this study were gathered from multiple sources. Archival records were analyzed to render an accurate historical account of the origins of program review. Archival records included memoranda, documents, and minutes of meetings related to the work of four relevant committees: the Council on Academic Affairs, the Graduate Council, the Policy and Standards Committee, and the Academic Review Subcommittee. To explain how the program review system operates, data gathered from published and unpublished descriptions of the review process and participant-observation of review meetings were used. Additionally, program review participants from 27 reviews were interviewed and closure documents from seven reviews were studied in order to identify program review outcomes.

All 27 programs in the sample had been in review for a minimum of one year. Focused interviews with 71 program review participants were conducted between September 1980 and February 1981. Faculty members, program heads, college deans, and central administrators were among those interviewed. In addition, closure documents, i.e., memoranda of understanding, from the seven completed reviews in the sample were analyzed. Transcribed interview data and documentary data were subjected to the constant comparative method, a technique for systematically collecting, verifying, organizing, and analyzing qualitative data.
Major Findings

Eight program review outcome categories were identified and classified into two distinct types: primary outcomes and secondary outcomes. Primary and secondary outcomes were distinguished on the basis of prime beneficiary (Blau and Scott, 1960). **Primary outcomes** are program review outcomes that predominantly benefit a program community (actors/or and activities inside programs). **Secondary outcomes** are program review outcomes that predominantly benefit the university community (actors/or and activities outside programs). Five primary outcome categories and three secondary outcome categories were identified. Briefly defined, they are as follows:

**Primary Outcome Categories:**

1. **Operational Outcomes.** Operational outcomes denote the ways in which programs changed their managerial functions. Typically, they included governance and administrative changes.

2. **Program Knowledge Outcomes.** Program knowledge outcomes signify an improved understanding of a program in review. They reflected perceptions among program review participants related to what had been learned about the programs in review.

3. **Curricular Outcomes.** Curricular outcomes constitute modifications to and developments in a program's curricular arrangements. Changes in courses, program requirements, and instructional practices are examples.
4. **Human Resources Outcomes.** Human resources outcomes represent changes pertaining to the use of personnel within a program. Human resources outcomes were the results of program review that affected faculty, program administrators and staff, students, and alumni.

5. **Physical Resources Outcomes.** Physical resources outcomes were the modifications made to and acquisitions of material goods used by academic programs. Most often they included facilities or equipment-related changes.

Secondary Outcome Categories:

6. **Personal Outcomes.** Personal outcomes represent perceptions about how program review participants were affected personally as a result of their involvement with program review.

7. **University Knowledge Outcomes.** University knowledge outcomes refer to an improved understanding of university operations. They reflected perceptions among program review participants related to what had been learned about the university.

8. **Communication Outcomes.** Communication outcomes are the results of program review that improved feedback between the program in review and other campus units. Communication outcomes also included the establishment of formal ties among programs.

In addition to the identification and classification of eight program review outcomes, five other general findings emerged from the study:
1. **Primary vs. Secondary Outcomes.** An analysis of the interview data shows that nearly two-thirds of the outcomes perceived by participants were primary outcomes. Slightly more than one third were secondary outcomes (Chapter V, Table 8, p. 142).

2. **Outcomes of Review and Phases of Review Process.** Interview data were arrayed to show the outcome categories that were identified in each program. Programs were clustered according to their phase of review (Chapter V, Table 9, p. 145). These data demonstrate that program review outcomes occur at each phase of the review process: the self-study phase, the memorandum of understanding preparation phase, and the signed memorandum of understanding phase.

3. **Documented vs. Communicated Outcomes.** Another analysis of interview data indicates that five of the outcome categories identified by program review participants also appeared in the seven signed memoranda of understanding. Three of the outcome categories, however, did not appear in these memoranda. Documented outcome categories were operational outcomes, curricular outcomes, human resources outcomes, physical outcomes, and communication outcomes. Communicated outcome categories included program knowledge outcomes, personal outcomes, and university knowledge outcomes.

   The documented outcome categories contained 58 per cent of the outcomes program review participants identified. Communicated outcome categories contain 42 per cent of those outcomes. Nearly a three to two ratio between documented and communicated program review outcomes was found.
4. **Outcomes Requiring Funding vs. Outcomes Requiring No Funding.** An analysis of outcomes in the memoranda of understanding discloses a difference between the number requiring additional funding for implementation and the number not requiring additional funding for implementation. Twenty-eight per cent of the outcomes required additional funding -- the infusion of new funds from outside the program. Seventy-two per cent required no additional funding.

5. **Outcomes Requiring Only Program Action vs. Outcomes Requiring Collaboration.** Outcomes specified in the memoranda of understanding were also analyzed by party involvement. This analysis demonstrates that the programs implemented 62 per cent of the outcomes on their own. The remaining 38 per cent of the outcomes required collaboration of two or more parties to review for implementation.

**Conclusions**

A number of conclusions were drawn from the research findings. These conclusions should be considered tentative conclusions in that they emerged from an investigation of a single program review process, one that is evolving and that has been applied to nearly half of the University's academic programs. The validity of these conclusions will be tested in future program review research, suggestions for which appear later in this chapter.
1. **The goal of program improvement permits a wide range of program review outcomes.**

   The central purpose of Ohio State's program review system is program improvement. Establishing a comprehensive purpose for review has enabled a variety of program review outcomes to occur. Eight qualitatively different program review outcome categories were discovered, and within each category several different but related outcomes were identified. Hence, in this study it appears that a comprehensive program review purpose influenced the occurrence of a broad spectrum of program review outcomes.

   The relationship between the purpose or the purposes of program review and the outcomes of review has been noted in the literature. In their study of academic program review, Engdahl and Barak (1980) found that "the immediate outcomes of program review are related to the purpose for conducting reviews . . ." (p. 133). Thus, it is reasonable to infer that a circumscribed purpose for program review would limit possible program review outcomes. For example, consider program elimination as a purpose of review. As a purpose, it specifies the intended outcome of review. Although unintended outcomes may occur, program elimination is a purpose with a single end-in-view.

   In contrast, comprehensive purposes such as program improvement allow for many possible outcomes because they do not restrict a priori the number or types of possibilities. Comprehensive program review purposes do not foreclose possible program review outcomes.
2. Most program review outcomes reflect evolutionary program change.

The literature on program review outcomes indicates that review does not often lead to revolutionary change. Rather, its value lies more in the contribution it makes to smaller scale change. This study corroborates that point of view. It was often the case that program review outcomes led to evolutionary program changes. Courses were added, deleted, or modified; policies were reformulated; and staff members were reassigned duties. These type of outcomes were more frequent.

Most programs simply did not make major changes, indicating perhaps that the need for major change is rare. Minor program changes, on the other hand, were probably more common because they involved outcomes that programs could implement on their own, outcomes they could implement before the process had been completed, and outcomes that required no additional funding.

Simply stated, the findings show that programs frequently adjusted operations that were within their span of control. Sixty-two per cent of the action items identified in seven signed memoranda of understanding involved programs acting on their own (Chapter V, Table 10, p. 148). Solutions to problems that could be implemented immediately were implemented (Chapter V, Table 9, p. 145), and many of them required no additional funding. Seventy-two per cent of the action items in seven signed memoranda of understanding did not require new funding levels (Chapter V, Table 10, p. 148).
3. Program review contributes to program planning and to the stabilization of academic decisions.

The analysis of the seven signed memoranda of understanding demonstrates that program review contributes to program planning (Chapter V, Table 10, p. 148). Seventy-four per cent of the action items contained in those documents relate to program plans for the future. That percentage is achieved by adding continuing actions and planned actions found in Table 10 (p. 148). Continuing action items reflect activities that have begun and will continue on an ongoing basis. Planned actions are items due to occur in the future.

Program review has also led to the stabilization of academic decisions. The nature of the memorandum of understanding makes stabilization possible. Arns and Poland (1980a) said that the memorandum of understanding can be viewed as a device "for restoring confidence in the benefits of planful behavior" (p. 283). Intended actions are clearly stipulated in the document; they depict who will do what for whom by when. Stabilization is reflected in the fact that signatories to memoranda of understanding do not make personal commitments; they sign on behalf of their office. The signatory page of each memorandum of understanding makes this explicit. When four parties are involved, the Provost signs for the Office of Academic Affairs; the Graduate Dean signs for the Graduate School; the college dean signed for the college; and the program head signs for the program. In this way, their signatures imply a commitment that goes beyond their personal tenure as administrators.
Recently, Peterson (1980) noted that although traditionally program review has not been viewed as a planning activity, contemporary concerns have given it a more planning-oriented role. The program review system investigated in this study is a process with a planning orientation.

4. Program review outcomes cannot be adequately assessed solely by analyzing program review documents.

This conclusion is based on findings about primary vs. secondary outcomes and findings about documented vs. communicated outcomes. Distinguishing between primary and secondary outcomes shows that the results of review can be divided between those that mainly benefited program communities and those that mainly benefited the university community (Chapter V, pp. 121-141). Distinguishing between documented and communicated outcomes shows that five outcome categories identified by program review participants were also documented in the seven signed memoranda of understanding. Yet, three of the outcome categories did not lend themselves to similar documentation (Chapter V, p. 143).

Most issues addressed in the seven signed memoranda of understanding reflect primary outcomes and documented outcomes. Consequently, an analysis of those documents yields a fairly accurate picture of how program communities were affected by review. But that analysis ignores the occurrence of secondary outcomes and communicated outcomes. Therefore, the assessment of outcomes based solely on an analysis of memoranda of understanding leaves a substantial number of outcomes unaccounted for and underestimates the impact and value of review.
Arns and Poland (1980a) noted that "the impact of program review cannot be adequately assessed in terms of the issues that are addressed" (p. 280). In an earlier paper, Poulton (1978a) said that "a broad sense of utility is needed to assess the 'success' of planning activities" (p. 15). Findings from this study support these observations.

5. **Program review is making the university more collegial.**

The meaning of secondary outcomes has been discussed previously in several contexts, but perhaps the most trenchant feature of secondary outcomes is their contribution to making the university more collegial. Secondary outcomes have positively influenced communication, understanding, and relationships across the university. In so doing, they have enhanced collegiality.

Secondary outcomes contributed to collegiality because of their effects on communication patterns among university actors. Findings from this study show that participants perceived improved feedback and that program review documents record instances of formal ties being established between programs. As a result of program review, information is now increasingly exchanged laterally as well as vertically throughout the organization. Faculty members from different disciplines and various academic subcultures are meeting face to face over time to discuss academic issues. Arns and Poland (1980a) said that lateral relations:
... help to decentralize decisions without creating self-contained units. They tend to make a happier campus and to enhance the strength of what we described earlier as 'the university community.' In the long run, the building of lateral relations may be a very significant benefit of program review (p. 282).

Secondary outcomes have also helped to establish a general knowledge base for administrators, faculty, and students. Program review participants have become more cognizant of university concerns and more knowledgeable about university operations. This improved understanding was mentioned by many of the program reviewers interviewed in this study (Chapter V, pp. 138-139). In this sense too, the university has become more collegial.

Secondary outcomes have also helped to establish new personal relationships between campus actors (Chapter V, p. 135). Twenty-seven programs were examined in this investigation, and 132 coordinating committee members are involved in those reviews. Due to their involvement in academic enterprises different from their own, some coordinating committee members have broadened their university perspective. Accordingly, one coordinating committee chairman said, "Now all of this I think is making me a better member of the graduate faculty in the university" (Coordinating Committee 4, p. 7).

6. Comprehensive, faculty-based program review is time consuming.

Several participants reported that program review consumed more of their time than they had originally anticipated (Chapter V, p. 136). In fact, in one way or another, every respondent mentioned the time
consuming nature of Ohio State's program review process. Some cited it as the salient shortcoming of the process. Practically every person interviewed expressed the view that the time devoted to program review ought to be reduced.

The issue of time is perhaps brought into sharper focus by drawing a distinction between the duration of review and the time spent on review activities. The duration of a review is its elapsed time, marking the time from its commencement to its closure, i.e., signing the memorandum of understanding. The time spent on review activities, however, is only the amount of time spent in commission of those activities. By definition, then, the duration of review will always exceed the time spent on review activities. This is so because program review occurs concurrent with the general operation of programs and because most faculty members do not receive released time for their involvement in program review. Thus, although the duration of a review might be four years, the time spent on review activities is less. This distinction notwithstanding, it is widely held by program review participants that at least the duration of review ought to be reduced.

Other universities, too, have struggled with the time issue. In a time reduction effort, the University of Illinois eliminated the use of task groups (similar to coordinating committees) and instituted a larger self-study component in their review system. Currently their
self-study process involves departmental responses to a series of questionnaires, a change which has decreased the amount of faculty time devoted to review (Wilson, 1981b).

Another factor related to time is the purpose of review. A comprehensive purpose adds greatly to the complexity, the time consumption, and the costs of doing review (Seeley, 1981). Therefore, reducing the time for review at Ohio State poses a dilemma. How can reviews take less time without being less comprehensive and without adversely affecting the effectiveness of reviews? Based on knowledge gained during the course of this study, two recommendations are offered.

First, it is apparent that the self-generative nature of the self-study process places the onus of responsibility for self-study on program members. In some cases, programs have had difficulty performing self-examination. The duration of time it has taken for a few programs to complete their initial draft self-study report exceeded four years. Frequently in these reviews communication between the self-study and the coordinating committees has been negligible. Therefore, it seems reasonable to consider strategies designed to prevent self-study committees and coordinating committees from neglecting each other.

A way to discourage the possibility that little, if any, communication will take place between self study and coordinating committee members is to re-establish informal quarterly or bi-annual meetings among coordinating committee chairmen. Organized by the program review staff, these meetings would be designed for
coordinating committee chairmen whose reviews are in the self-study phase. The meetings would present an opportunity for coordinating committee chairmen to comment on the progress of their reviews, to exchange ideas and concerns, and to clarify their role in program review. In preparation for these meetings, coordinating committee chairmen would probably need to interact with self-study committee members in more than a perfunctory way. Perhaps these meetings might help to sustain momentum at this early but crucial stage of the process.

Second, the memorandum of understanding preparation phase can be shortened. The purpose of this phase is to identify issues, to agree on mutually acceptable actions, and to embody those issues and actions in a draft memorandum of understanding suitable for comment and ultimately for signing. A procedure designed to reduce the average time spent drafting memoranda of understanding is recommended.

The recommended procedure involves preparing a document containing three sections:

1. issues from the relevant program review reports on which there is general agreement and which are suitable for inclusion in a memorandum of understanding.

2. issues from the relevant program review reports on which there is disagreement and which are suitable for inclusion in a memorandum of understanding.

3. issues from the relevant program review reports which are not suitable for inclusion in a memorandum of understanding.
This procedure could be performed by a member of the program review staff. It would commence as soon as the parties to review submitted their comments on the external reviewers' report. The document would be distributed to the parties prior to their first meeting about the memorandum of understanding. Also, before that meeting, responses to the document could be gathered by mail and analyzed. At that initial meeting about the memorandum of understanding, it could be decided who among the parties will write the initial draft memorandum of understanding. The document and the responses would be used as the basis of the initial draft.

Hence, a range of relevant issues would be arrayed and would serve as a starting point. Parties could then focus on the issues and actions that require attention. In this way, achieving a signable memorandum of understanding might take less time.

7. Program review at Ohio State displays several characteristics of the concept "loose coupling."

The concept of loose coupling, as detailed by Weick (1976), conveys an image that events or activities within an organization are connected weakly or tacitly so that each event can preserve "its own identity and some of its physical and logical separateness" (p. 3). Weick believes further that "it is conceivable that preoccupation with rationalized, tidy, efficient, coordinated structures has blinded many practitioners as well as researchers to some attractive and unexpected properties of less rationalized and less tightly related clusters of
events" (p. 3). While the concept of loose coupling need not be used normatively, Weick argues that certain functions can be served when elements within an organization are loosely coupled.

Findings from this study suggest that the process can be profitably viewed as a loosely coupled system. Six propositions about loose couplings are supported with evidence from this study.

First, Weick proposed that loose coupling permits identity and separateness among elements to persist. The Ohio State University program review process preserves identity among program units by not relying on standard forms and protocols in review. Instead, the process relies more on face to face communication among the parties to review so that qualitative dimensions of programs can be understood. In this way, units can convey their own identity, complexity, and idiosyncratic qualities and not merely react to a set of forms. A study by Hall (1978) concluded that "limited communication occurred when standard protocols reduced the need for contact between evaluation units and the departments being investigated" (p. 22). It is difficult to preserve identity under those circumstances.

Preservation of separateness among units is evident in the way that "program" is defined in the Ohio State review system. The definition is broad and thus contributes to retaining separateness among different types of academic units. By stating that a program is "a coherent set of academic activities with specified goals," a
diversity of program configurations can be reviewed (Ohio, 1978, p. 3). In Ohio State's system, the units of review have been entire colleges, schools, research centers and institutes, departments, and interdisciplinary programs. In contrast, a number of review systems review only degree programs or programs with budgetary lines, excluding other kinds of academic entities.

The second proposition is that loose coupling provides a sensitive sensing mechanism. Weick (1976) said "that loosely coupled systems preserve many independent sensing elements and therefore 'know' their environments better than is true for more tightly coupled systems" (p. 6). Findings from this study demonstrate that better understanding of programs and of the university has occurred (Chapter V, pp. 123-126; pp. 138-139). Occasionally new problems were discovered, but more often old issues were cast in new light. Moreover, program review has also been a good medium for exploring issues that lie beyond a program's boundaries.

The third proposition is that loosely coupled systems are good systems for localized adaptations. Localized adaptation means that if elements in a system are loosely coupled to each other, then adjustments in a single element can occur without adversely affecting the whole system. In program review this has occurred. For example, in two program reviews the self-study committee and the coordinating committee were collapsed to form a single comprehensive committee. In another three programs involved in biochemical instruction were
reviewed as a single program. Each program conducted its own self-study, and a single coordinating committee managed the entire review.

By definition, localized adaptation is the opposite of standardization. Although the program review process has a general framework for review, it is a framework that is flexible and adaptable. The ability to make adaptations provides an opportunity to experiment and to adjust to local needs. In the instances cited above, consolidating two committees into one appears not to have worked well. On the other hand, the second approach was effective; it laid a basis for program consolidation. When the review system was designed, adaptability was an important consideration. In this way, program review at Ohio State permits experimentation to occur without affecting the entire process.

A fourth proposition is that a loosely coupled system can potentially retain a greater number of mutations and novel solutions than would be the case with a tightly coupled system. In other words, evolutionary and revolutionary changes occur. Program review has produced both.

Most of the changes in programs have been evolutionary (Chapter V, pp. 127-128). Minor adjustments in curriculum, operations, physical resources, and human resources have been identified (Chapter V, pp. 121-133).
In addition to the programs in review, the other parties to review have made evolutionary changes as well. For example, the Graduate School has changed its data collection processes and data presentation format as result of program review.

Revolutionary changes have been less frequent. The initiative now underway to examine statistical instruction across the university can be viewed as a revolutionary approach to an entrenched problem.

Fifth, it has been proposed that breakdowns in one portion of a loosely coupled system can be sealed off from affecting other portions of the system. Evidence to support this proposition can be drawn from this study. Ohio State's review system currently has 48 programs that have completed or are in some stage of review. A few of them have been problematic. One in particular has had difficulty coming to terms with its self-study. Others have had difficulty at the memorandum of understanding preparation phase. Yet these idiosyncratic problems have not posed a threat to program review in general. The remaining reviews continue to make progress while trouble spots in other reviews are isolated and resolved.

The establishment of a separate coordinating committee for each review makes the sealing off of breakdowns possible. A coordinating committee can devote itself to resolving difficulties that arise in the review for which it has responsibility. On the other hand, reviews managed by a central committee lack this flexibility. Poland and Arns (1978) discussed how one central review committee became the victim of its own unrealistic timetable.
A sixth proposition is that in loosely coupled systems there is more room available for self-determination among actors. Weick (1976) argued that "a sense of efficacy might be greater in a loosely coupled system with autonomous units than it would be in a tightly coupled system where discretion is limited" (p. 8).

The openness found in the Ohio State system creates the possibility for self-determination among actors. For example, it has already been noted that great discretion and autonomy are given to self-study committees. With the coordinating committee, they devise their own plan for self-examination.

Self-study chairmen have recognized the value of their independence. One said," . . . I've been impressed all along with the willingness of Academic Affairs to meddle as little as possible with the process . . . " (Self-Study Committee Chairman 20, p. 12). Another wrote, "In general, the faculty appreciated the privacy of the reviews - both the room and the absence of administration" (Ohio, October 13, 1978).

Nothing inherent in the openness of program review at Ohio State insures that actors will probe deeply and will use wisely the discretion they have. Arns and Poland (1980a) explained that "it is difficult for them [program faculty] to understand that they can pose and respond to their own questions and that we care about the meaning of data" (p. 281).
The concept of loose coupling can be usefully applied to program review at Ohio State. The findings from this study indicate that program review: (1) permits identity and separateness among units of review to persist; (2) provides a sensitive sensing mechanism; (3) permits localized adaptation; (4) retains mutations and novel solutions; (5) seals off breakdowns, and (6) provides room for self-determination.

Considerations for Future Research

1. A study of program review outcomes at Ohio State based on a broader sample of program review participants.

A questionnaire based on the findings of this investigation might be developed and used to survey a greater number of program reviewers. Instead of focusing primarily on persons with leadership roles, a broader range of committee members could be surveyed to answer two research questions: (1) Do program review participants perceive outcomes similar to the ones identified in this study? (2) What other outcomes are identified? A broader based investigation of program review outcomes might validate and verify further the findings of this study.

2. A continuation of the document analysis portion of this study.

The outcome analysis of the seven signed memoranda of understanding has provided baseline data about documented program review outcomes. As subsequent memoranda are signed, they should be
analyzed and integrated into the existing data base. In this way, the pattern of outcome categories would be determined over time and provide the University with systematically derived documentation about program review outcomes.

3. **An assessment of program review outcomes at each stage of Ohio State's review process.**

   For the most part, this study considered the outcomes of the entire program review process. In another study, it would be possible to view each stage separately. Do particular phases of review produce particular outcomes? What are the contributions of self study, of external review, of preparing a memorandum of understanding? These questions could guide an investigation of program review outcomes at each stage of review.

4. **A multi-institutional study of the impact of students on program review.**

   No study has attempted to focus on the contribution of students during program review. What are the ways students are involved in different program review processes? Are some ways more effective than others? It would be interesting to pursue these questions as well as others related to the impact of students on the review process.

5. **A multi-institutional study to test the hypothesis that review processes with comprehensive purposes will produce a wider range of outcomes than systems with limited purposes.**

   A conclusion of this study is that a comprehensive purpose for review enables a diversity of outcomes to occur. It can be inferred...
from that conclusion that a positive relationship exists between the comprehensiveness of program review purposes and the range of program review outcomes. A study of review processes at different institutions could be undertaken to test that hypothesis.

6. A multi-institutional study designed to test the hypothesis that loosely-coupled review systems will produce a wider range of outcomes than would tightly coupled systems of review.

This study shows that a loosely structured, flexible program review process yields a variety of outcomes. It has been suggested elsewhere that attention to the way reviews are done is important (Arns and Poland, 1980b). A study of program review processes that are tightly and loosely structured could be undertaken to determine if loosely coupled program review processes produce a wider range of outcomes.

In Conclusion

The importance of reaching closure in program review has been emphasized throughout this study. Furthermore, it was pointed out that reaching satisfactory closure can be extremely difficult at times. So it has been with completing a research project of this magnitude with its attendant time demands and personal involvement. On the whole the effort has been worthwhile both personally and professionally.
Due to the nature of this study, many hours were spent discussing program review with Ohio State faculty members and administrators. They gave generously of their time, and for this a great debt of gratitude is owed them. Their willingness to participate in this study was invaluable and perhaps attests to the importance they attach to program review.

Program review is indeed an important activity for colleges and universities, especially at a time when institutional life is increasingly vulnerable to external forces. Though stated for a different purpose, words expressed by Kurt Waldheim, former United Nations Secretary General, are appropriate in this context, for they help to explain why now is a propitious time for systematic program review. "Many great civilizations," he said "have collapsed at the very height of their achievement because they were unable to analyze their basic problems, to change direction, to adjust to new situations which face them by concerting their wisdom and strength" (cited in Pelczar, 1979, p. 55). Although it offers no guarantees, program review can assist colleges and universities to marshal their wisdom and, thus, to shape their destinies.
Appendix A

References for Data Reported in Table 4, Chapter II (p. 67)

1. Florida International University

   A. Greenberg, B. Program evaluation conducted through an office of institutional research: and approach, some results, and many implications. In R. H. Fenske & P. J. Stansky (Eds.), Research and planning for higher education. Tallahassee, Florida: Association for Institutional Research, 1978.

2. Florida State University

   A. Johnson, R. M. On initiation, review and termination of graduate programs. Research in Review, November, 1974 6(1), pp. 6-7 (Florida State University).

3. Miami University


4. The Ohio State University


5. **Oklahoma State University**


6. **Penn State University**


7. **University of California-Berkeley**


8. **University of Illinois**

   A. Petrie, H. C. Principal considerations in developing a program evaluation system. Paper presented at the conference on planning and conducting program evaluations and reviews in higher education, Clearwater Beach, Florida, January, 1981 (mimeographed).


   C. Wilson, R. F. Program evaluation at the University of Illinois at Urbana-Champaign. In R. Wilson (Chair), Evaluating academic programs: alternative purposes, procedures, and results. Panel presentation at the Association for Institutional Forum, Minneapolis, Minnesota, May 18, 1981b (mimeographed).

9. **University of Iowa**

10. **University of Michigan**


11. **University of Nebraska-Lincoln**

A. Seagren, A. T. & Bean, J. P. *Evaluating academic programs: alternative purposes, procedures, and results*. In R. Wilson (Chair), *Evaluating academic programs: alternative purposes, procedures, and results*. Panel presentation at the Association for Institutional Research Forum, Minneapolis, Minnesota, May 18, 1981 (mimeographed).
Appendix B  

Distribution of Program Sample  
by Organizational Unit (N = 27)

<table>
<thead>
<tr>
<th>Organizational Unit</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department</td>
<td>16</td>
</tr>
<tr>
<td>Academic Faculty</td>
<td>1</td>
</tr>
<tr>
<td>School</td>
<td>2</td>
</tr>
<tr>
<td>College</td>
<td>3</td>
</tr>
<tr>
<td>Field of Study</td>
<td>2</td>
</tr>
<tr>
<td>Research Center or Institute</td>
<td>2</td>
</tr>
<tr>
<td>Scholarly Journal</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>27</strong></td>
</tr>
</tbody>
</table>
DATE:  October 24, 1980
TO:    OSU Program Review Self-Study and Coordinating Committee Chairmen
FROM:  Terry Roark, Associate Provost, Academic Affairs
        William Poland, Associate Dean, Graduate School

This will introduce Daniel DiBiasio. Mr. DiBiasio is a Graduate Research Associate in the Graduate School. His principal responsibility is to assist Dean Poland in the graduate aspects of our program reviews.

We are pleased to have Mr. DiBiasio do his dissertation on our program review processes, and he has the support and cooperation of our offices.

We hope you will find it possible and even personally rewarding to take part in Mr. DiBiasio's dissertation. The more we can understand and learn from what we have done in review, the better our later reviews will be.
Dear Professor or Dean:

The subject of the following quotations is undoubtedly familiar to you:

- It has become clear that a number of institutions are beginning to look more seriously at academic program review as a mechanism for making assessments about institutional vitality. (Kenneth Mortimer and Michael Tierney, Pennsylvania State University)

- It is difficult for a faculty member to resist completely the idea of organized program review. As an instrument of critical self-evaluation, it has an inescapable role in the university. (Robert Stepsis, St. Louis University)

- ... the indispensable condition of a genuine university is that its faculty assume primary responsibility for quality, health, and usefulness of its academic programs. (Donald K. Smith, University of Wisconsin)

These remarks refer to academic program review, an activity at this university in which you have been substantively involved.

As a doctoral candidate in Higher Education at OSU, I have selected as a dissertation topic an investigation of the University's program review process. Like the Heisenberg Principle in atomic physics, higher education recognizes the indeterminate, imprecise, and uncertain state of program review research. Few studies have systematically analyzed a particular program review method; apparently none have attempted to examine the consequences of review. My dissertation will record attempts to do both with the OSU program review process.

With this in mind, I plan to interview participants whose experience is vital to generating valid and reliable knowledge about program review at OSU. The results of the interviews will form a portion of the data base for the study.
I am writing to invite your participation and express my earnest hope that you will agree to discuss program review with me sometime soon. I envision a 30-45 minute interview and, with your permission, would like to cassette tape the interview to facilitate analysis. Statements made during the interview will be held confidential, and confidentiality will be ensured by aggregating these data and by not identifying individual respondents. In addition, I will provide you with an interview guide in advance.

Within a week I shall contact you to determine if you are willing to participate in the study. If you agree, we can arrange a meeting time. I look forward to the possibility of discussing program review with you.

Thank you for your time and consideration.

Sincerely yours,

Daniel A. DiBiasio

DAD:kmk
Dear Professor or Dean:

This is to confirm our appointment scheduled for Month, Day, Year at Time to talk about program review.

To focus our discussion and to guide the interview, I have listed a few important areas of inquiry. They include the following:

1. your role in program review
2. the process and conduct of program review
3. the consequences of program review
4. other issues in program review

See you Day.

Sincerely,

Daniel A. DiBiasio
Graduate Research Associate

DAD:kmk
Appendix F

The Ohio State University

University Hall
230 North Oval Mall
Columbus, Ohio 43210
Phone 614 422-6031

Presentations and Publications
Related to Program Review At Ohio State

Presentations


Publications


Appendix G
The Ohio State University

1978
Guide for Program Reviewers
1. Introduction

Background. In 1974, various groups of our colleagues—including the deans, the Policy and Standards Committee of the Graduate Council, and the Council on Academic Affairs—began to explore new ways of reviewing academic programs. They looked into previous reviews on this campus and examined review procedures in use elsewhere, and as their investigations progressed, we were able to make some provisions for program review in the 1976 biennial planning process. Our self-studies in preparation for the North Central Accreditation visit brought us useful experience, and the Regents' mandate (in Master Plan: 1976) that all state universities conduct formal program reviews brought us additional incentive. During the 1976-77 academic year, then, we launched—as part of a pilot study of program review methodology—twelve reviews of representative programs. We expanded our effort early in the 1977-78 academic year with the expectation that by Spring, 1978, we would have at hand a body of experience and written materials on which a continuing series of program reviews could be based.

What follows in this Guide is a summary of those written materials based primarily on several planning and policy documents produced over many months by William Poland, Associate Dean of the Graduate School, and Robert G. Arns, formerly Associate Provost for Instruction here and now Academic Vice President at the University of Vermont. Professors Poland and Arns consulted frequently with colleagues on and off campus as they did their work, and their draft materials were circulated widely for faculty comment. This integrated version of their several papers incorporates many faculty comments and suggestions, as will successive editions as Program Review at Ohio State is continually refined by its participants. In short, this document is the latest in a series, each of which is the product of many hands working in an evolutionary process.

Purpose of Review. The purpose of program review is program improvement. We need to articulate our goals, to test our effectiveness in meeting those goals, to measure the quality and relevance of our activities, and to see how well the ways we allocate resources and organize academic units serve our mission. Faculty, students, and administrators have always been concerned with these matters. Now, however, the University is seeking formal processes which will generate a more comprehensive view of where we have been, where we are, and where we ought to be going.

We need to understand ourselves better not only in order to do a better job of meeting our educational responsibilities, but also in order to explain ourselves more effectively to our several publics. Review can provide recognition for a program's accomplishments as well as the information its participants may need in order to oversee orderly development through redistribution of human, fiscal, and physical resources.

<table>
<thead>
<tr>
<th>Description</th>
<th>Evaluation and Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program</td>
<td>Who are we?</td>
</tr>
<tr>
<td>Activities</td>
<td>What do we do?</td>
</tr>
<tr>
<td>Resources</td>
<td>How much does it cost?</td>
</tr>
<tr>
<td>Goals</td>
<td>Why do we do it?</td>
</tr>
<tr>
<td>Goals vs. activities</td>
<td>How does what we do----- Goals vs. activities relate to why we do it?</td>
</tr>
<tr>
<td>What difference does---------</td>
<td>Value</td>
</tr>
<tr>
<td>How well do we do it?---------</td>
<td>Quality</td>
</tr>
<tr>
<td>How is needed to--------------</td>
<td>Effective</td>
</tr>
<tr>
<td>make what we do more valueable? to help resources us do it better?</td>
<td></td>
</tr>
</tbody>
</table>
While they may share common attributes, no two programs are alike, and program improvement depends most on the sensitivity, understanding, commitment, and action of those involved in the program. Thus the most critical step in the review process is a searching examination of the program by its participants.

Self Study. In this first step, a group of faculty and students from the program join in identifying the program's goals, assessing the quality and value of the program in light of those goals, and proposing courses of action leading to program improvement.

The self study has two purposes, (1) to increase program participants' awareness of what they are doing and what they ought to be doing, and (2) to provide a basis for later steps in the process by compiling descriptive information about the program for communication to other parties to the review process.

Self study should emphasize explanation and evaluation, not simply data collection. It is easy to collect data, it is more difficult and considerably more valuable to explain what the data mean, to measure the current status of the program, to clarify and affirm goals, and to determine the kinds of change and support needed to reach those goals.

The self study report should be as brief as possible—with descriptive material referenced or in appendices—consistent with the need to address effectively several audiences: the program participants, the other parties to the review—deans, the Provost, and the Graduate School—and the external reviewers. The self study report and each successive stage in the review must be clear and credible if they are to lead to program improvement.

The size and composition of the Self Study Committee will depend on the program under study, although in all cases both faculty and students should be involved. Membership should be determined in accordance with the specific characteristics of the program, e.g., the graduate chairman and a graduate student ought to be involved if graduate study represents a significant component, and appointing officials should pay special heed to preserving committee independence: the department chairman will be an important resource but ought not to dominate the process. The Self Study Committee will be appointed by the college dean after consultation with those involved in the program. In the event that the program involves an entire college or more than one college, the Provost will appoint the Self Study Committee.

II. The Review Process

As we suggested in the introduction, among those who stand to learn from joint review are faculty and students in the program, administrators, and those who must represent the program to the University's constituencies. However, program improvement depends most on the sensitivity, understanding, commitment, and action of those involved in the program. Thus the most critical step in the review process is a searching examination of the program by its participants.

Such an array presents two problems: first, providing answers to such questions does not usually follow such an orderly linear progression. For example, as we will discuss later, our understanding of a program's goals may well grow or change as a consequence of the review process. Second, because material descriptive of programs comes readily to hand (in annual reports, catalogue entries, and management data files), we may give too much prominence to questions requiring only descriptive answers. While description provides a useful foundation for program review, our emphasis must be on evaluation and the planning it can lead to. Evaluation begins with the comparison between goals and activities—in asking "How well does what we do relate to why we do it?" Planning depends on critical examination of value, of quality, and of the effective use of resources; meanings for these key terms are stipulated as follows:

Value inheres in the congruence of a program's goals to the goals of students, of the University, and of society.

Quality is determined by the extent to which a program achieves its goals.

The effective use of resources depends on the appropriateness of our allocation and organization of human, fiscal, and physical resources in support of valuable programs of high quality.

"Program" Defined. Experience at other institutions suggests that there is no single set of procedures which will serve the needs of every program. For present purposes we will define a program simply as a coherent set of academic activities with specified goals. Existing fiscal departmental or college lines need not be used in defining a program; indeed, a program may be a traditional department, or parallel components of several departments, or coherent sets of departments, or an entire college, or some other activity—such as the University's Basic Education Requirement—which involves many departments and colleges. One caveat: reviewers should bear in mind that much of the business of the University takes place at multiple sites across the state.

The following sections describe various aspects of the review process as it is evolving here at The Ohio State University. We emphasize throughout that details are illustrative and not prescriptive. No two programs are alike, and while they may share common attributes, no reviews are likely to follow identical patterns. Thus, rather than establishing a rigid protocol for program review, we have worked to provide an organizational and conceptual base upon which reviewers might ground their own work.
External Review. In many cases independent observers can identify strengths and weaknesses and evaluate projected courses of action more effectively than can program participants.

An External Review Committee, typically composed of three or more scholars from other major research universities, should visit the campus and provide a written report to the Coordinating Committee, which provides the outsiders their charge. The visitors—to be appointed by the Provost upon the recommendation of the other parties to the review—should include not only those knowledgeable in the relevant discipline(s) but also at least one person familiar with the role of similar programs in institutions like Ohio State. If the program has a professional dimension, one of the external reviewers should come from the ranks of practitioners.

We emphasize here that the External Review Committee is expected to make a significant contribution to the study of the program under review and not simply to constitute a panel of outside investigators operating from the kind of adversary stance which often characterizes accreditation visits. As distinguished and concerned colleagues, visitors should be charged with helping us to see our own affairs more clearly.

The number and particular qualifications of visiting observers, the duration of their visit, and the issues they should consider will depend on the nature of the questions raised in a specific review. All the parties to the review should be in agreement on these matters and on the identity of the external reviewers before invitations are issued.

Closure. Ultimately the success or failure of the review will depend on the extent to which all parties can agree on a course of action based on lessons learned and can embody this course of action in a prescriptive document called a memorandum of understanding. This memorandum will set forth positions of all parties with respect to the goals and objectives of the program and the plans for their achievement and will serve as a basis for measuring subsequent progress. A hypothetical example of such a document is provided in Appendix D.

Coordination. Throughout the review process a group of respected faculty from within the university will play a coordinating and facilitating role. The most important function of this Coordinating Committee is to promote communication at each stage among the various parties and within the broader university community, making sure, for example, that disciplinary jargon does not render the review unintelligible to some of the audiences to which it is addressed.

The Coordinating Committee has the following specific tasks:

1. to work with the Self Study Committee to outline the self study issues and to plan the self study report.
2. to work with all parties in arriving at a mutually acceptable design for the external review, including the selection of the External Review Committee and the charge to that group.
3. to merge the self study report and the external review report and, when necessary, to design such additional studies as may be required to reconcile substantial differences. This process should result in a concise report to the program, the college(s), the Dean of the Graduate School, and the Provost.
4. to coordinate the development of the memorandum of understanding by the parties to the review.
5. to monitor progress of implementation of the plan of action embodied in the memorandum of understanding.

A Coordinating Committee—typically a group of three to five senior members of the university faculty—will be appointed for each review by the Provost after consultation with all concerned parties. The majority of Committee members should be faculty members from areas related to but not directly involved in the program. The remainder will be drawn from other campus groups which have been involved in program review processes.

Role of Accreditation. If the program under study or a component of it is subject to accreditation, this should be taken into account in planning the review. An accreditation review is not a substitute for a joint program review, but a reasonably fresh accreditation report might ease self study or reveal neglected lines of inquiry or suggest a different emphasis for the work of external reviewers. It follows then that review planners should consider a pending external accreditation review in scheduling the university's program review; in some cases it may be possible to combine the two.
IIIA. Goals

If it is true—as we have asserted above—that program evaluation begins with the comparison of goals with activities, in asking ourselves "How well does what we do relate to why we do it?"—then it follows that identifying and affirming program goals is a necessary step in program review.

Defining Goals. As applied to programs, there are two essential elements in the concept of goal—intent and outcome. A goal involves an intent to bring about some future state; it further implies an outcome, a desired future condition or state. As statements of intent and outcome, goals are to be distinguished from activities and processes.

Goal definition may err in being too broad, and thus meaningless, or too narrow, and thus incomplete. It may be tempting to state a program's goal as "teaching, research, and service involving X" or "to become the best program in Ohio." The first is not a goal statement at all since it speaks of activities rather than outcomes. The second is too broad on several counts: it gives no clue as to the meaning of "best". ("Best" with respect to what criteria?) It omits any reference as to how performance is to be determined. It specifies no time frame. Moreover, without a more specific definition of the program or of the relevance of "Ohio" as a referent domain, it may well also err in being too diffuse.

Goal statements can also be too narrow. The goal "to increase the number of graduates by 20 percent by 1979" could be achieved at the expense of quality. While it would be easy to measure performance for this goal statement, it is clearly incomplete.

The most useful goal statements lie somewhere between these extremes and usually involve multiple goals to be sought simultaneously. Progress toward some of these goals will be easy to measure; toward others, very difficult. In either case, such goals tend to be specific and limited in scope, although by no means trivial. Taken together they set the direction for a program and the criteria for its evaluation.

The following quotation summarizes many of these considerations:

"In the abstract, it is not difficult to generate a set of goals—high priority aspirations—to be achieved over a certain time period. What is really difficult is to do this in such fashion that (1) the goals are stated with minimum ambiguity, (2) the goals are understood and shared by most participants and constituencies, (3) the goals are operational in the sense that effective guidelines can be derived or are actually embodied in goal statements, (4) incompatibility or conflict among various goals is either negligible or provided for, (5) resources and activities are explicitly geared to aspirations, (6) the need for assessment of progress is accepted by everyone, and (7) there is no 'hidden agenda' of other goals which will actually govern how people behave."

The Timing of Goal Definition. Experience suggests that goal definition may take place as a first step in the self study process, but will not necessarily do so. Reviewers of some programs may find a priori goal definition painful and unsatisfying. There is, in fact, a point of view that suggests that an understanding of goals may emerge more comfortably from the analysis of activities and their results:

"...perhaps the linear model for thinking about goals—a priori definition, goal-directed activity, estimation of success or failure, redirection of pursuit, etc.--should be questioned for at least some subsets of University goals. If education is change, and if the University will continue to be subject to internal and external pressures for change, continuous goal-setting and modification, and goals arising from activities ought to be seen as a constant recycling process..."

We expect that many program reviewers will find the best approach to lie somewhere between a priori definition and past facts recognition—an iterative process in which an understanding of goals grows and is refined throughout the review process. In any case, we are convinced that effective review requires the definition and testing of intended outcomes. To this end we provide the following for the consideration and assistance of review committees.

Goals and Objectives. In a continuing review process, an arbitrary but useful distinction can be drawn between goals—long-range outcomes, with a time scale of perhaps five years or more, generally not defined in measurable terms—and objectives, short-term measurable achievements which are intended to facilitate progress toward a particular goal. In this approach a program specifies its goals and, for each goal, a number of objectives aimed at fulfillment of that goal.

The following example is adapted from a report of an ongoing process at a two-year technical college:

1Report submitted to the Centennial Commission on the Future of the University by Group III of the Task Force on University Goals (1971).
2Ibid.
Goal
To provide instruction for the broadest possible range of high school graduates and adults which is relevant to the needs and aspirations of students, industry, and the local citizens and which is aimed uncompromisingly at successful career employment and personal fulfillment for the individual.

Related Objectives
That 95% of the graduates available for employment will obtain job placement within one month of graduation.

That 80% of the graduates available for employment will obtain related job placement within one month of graduation.

Of the full-time students who initially enroll, 60% will subsequently complete their associate degree program within three years.

Equal success in graduating will be achieved by those students who begin their studies with a developmental education course and those who begin with a college-level course.

Goal
To develop and offer a comprehensive variety of associate degree programs in applied science and applied business which will prepare a student for employment as a technician or paraprofessional and which are compatible with the needs of industry and of the individuals served.

Related Objectives
That 80% of the graduates available for employment will obtain related job placement within one month of graduation.

To conduct a comprehensive in-district educational program needs and interest survey of both industry and prospective students.

To develop and implement one new associate degree career program during the next year.

In toto the report provided a long list of goals and related objectives. Individually, the goals might be viewed as too general, the related objectives as too specific. The first two objectives, for example, speak to job placement with no requirement that employment be sustained or satisfying or that the graduate have the capacity for continued growth. These latter notions do, however, appear elsewhere in the list of goals and objectives. For example:

Goal
To develop in graduates the technical knowledge, skills and attitudes which will provide for successful job entry performance, continued employment and advancement.

Related Objective
That periodic followups (1, 3 and 5 years) of employed graduates (degree and certificate) show continued employment in their field or a related field as follows: After one year-80%, after three years - 75%, after five years - 70%.

Several objectives, taken together, are thus intended to assure a balanced outcome. To the extent that such statements can be made complete they can be quite useful in establishing the direction of a program and in determining progress.

While we hope this example will be helpful, we realize that a university is not a technical college. Many university programs explicitly aim--far beyond the first job--at developing the capacity for continuing career development and a life consciously led. It is therefore more difficult to specify measurable outcomes and to assess progress. We often find we must be content with goals statements which defy quantification. Still we must find ways to make judgments and determine the extent to which we have been successful. Although we may wish to build into ongoing activities some specific periodic measurements (e.g., an annual departmental study of job placements), we also need to recognize that much of what we ought to be doing does not lead to easily measurable outcomes, a particularly rigorous challenge in a period in which our ability to explain our outcomes will increasingly determine the level of public support we enjoy.

In summary, we must not emphasize measurability at the cost of genuine meaning. Neither should we delude ourselves that we can avoid the need to demonstrate with some objectivity the value of our goals, the quality we achieve, and the effective use of the resources of which we are stewards.
Appendix C - Inventory of Goals. The Ohio State University. George W. Baughman, Director, Office of Special Services, made an extensive study of existing documents. The results of this study were reviewed by various persons, and we believe that the present draft may be a useful starting point for discussion and for further development of an understanding of the University's goals.

IV. Goals and Evaluation

Evaluation involves relating activities to the goals of the program by asking such questions as:

(1) How and how effectively does each of the program elements contribute to the attainment of specified goals? (2) How have changes in the level of activity or quality of performance over a period of time affected the attainment of specified goals? (3) What proportion of program resources is devoted to high priority goals? to lower priority goals? --issues of quality and the effective use of resources. Evaluation also involves issues of value--judgments concerning how relevant and central the goals of a program are to larger University and societal values.

You will also note at once that these are general goals and that the inventory does not carry a sense of priorities. Relative importance will, of course, vary depending on who is asked. The priorities of Ohio's citizen may not match those of the faculty. While we must be aware of and provide for such differences, it does not seem wise for us to impose a single set of priorities on the inventory list.

Aids to Goal Definition and Ranking. We are not alone in seeking to define and order goals and to measure performance. Universities and other organizations have been struggling with these questions for years; helpful techniques and some useful results have emerged.

There are, for example, faculty members on campus skilled in the techniques of assisting groups to discover and rank goals. Through the process called Nominal Group Technique, a self study group might make considerable progress in a two-hour session toward an understanding of program goals and of their relative priorities. The Office of Academic Affairs can supply the names of faculty members who have volunteered to assist in such activities.

Mindful that this Guide will evoke such questions as "What are the goals of The Ohio State University?", "How will we know whether this program is appropriate to the University's needs?", "What is the full range of the University's instructional needs?", we present the following items as targets for discussion. We invite the programs under review and the committees involved to assist in improving the University's statements of mission and goals with the understanding that missions and goals are ever evolving and always difficult to define, and with the recognition that faculty, students, administrators, alumni, professional organizations, and our various publics will place varying emphasis on the items enumerated.

The items presented are:

Appendix A - OSU Affirmative Action Statement

Appendix B - Statement of Mission. The "mission" as defined in this one-page document is a statement of philosophy and University self-image rather than a goals statement. Several persons were involved in the drafting of this statement before submission by President Enarson to the Board of Regents for inclusion in the 1976 Master Plan.

Appendix C - Inventory of Goals. The Ohio State University. George W. Baughman, Director, Office of Special Services, made an extensive study of existing documents. The results of this study were reviewed by various persons, and we believe that the present draft may be a useful starting point for discussion and for further development of an understanding of the University's goals.

Delbecq, Andre L., Van de Ven, Andrew H., and Gustafson, David H., Group Techniques for Program Planning (Scott, Foresman and Co., 1975)
Finally, we do not expect that the questions addressed in a given review will evoke unanimous responses. When differing opinions arise they should be explicitly stated in the self study report.

Value

1. What are the primary goals for the program? How do they relate to societal needs? to national needs? to the needs of Ohio? to the needs of OSU?

2. How does the program contribute to the social, cultural, and educational institutions, government, and industry of the Columbus community? of the State of Ohio?

3. How does the program contribute to the full range of the University's instructional needs: undergraduate, graduate, service, evening program, continuing education, extension?

4. What are the specific education objectives for each of the various program components: undergraduate and graduate degree programs, service programs such as Undergraduate Basic Education, continuing education, extension and other community services?

5. How often are these educational objectives reviewed and by whom? By what mechanisms is this review carried out?

6. How do the educational objectives of the program relate to the educational goals of this University? How do the program's activities contribute to the service mission of the University?

7. What is the recent history of the program's discipline? What are the current national trends in the discipline? How do the program's instructional and research activities relate to these trends?

8. To what extent are the objectives of various program components congruent with or purposefully different from those of peer programs in other institutions? What are the reasons for this choice of focus?

9. What subjects or activities commonly offered in similar programs at other universities are not offered as part of this program? Why not?

10. What subjects or activities not commonly offered in similar programs at other universities are offered as part of this program? Why not?

11. How do the goals of various degree programs and professional and research-oriented activities relate?

12. What educational objectives is the program considering for the future? Why are these new educational objectives desirable? What activities would be proposed to achieve these objectives? What human and material resources would be required to support them?

13. How well do program administrative policies reflect University Affirmative Action commitments? How successful has the program been in meeting affirmative action goals? for faculty? in student recruitment and admissions? in staff recruitment?

14. If the program provides courses which serve to meet the Undergraduate Basic Education Requirement (UBER), what is the rationale for the organization and content of these courses? How do they relate to courses for majors? How are they staffed? Who uses UBER courses? What do they think of them?

15. What UBER courses are recommended for your majors? Why? How well do they serve?

16. Does the program offer remedial courses? What courses? Why? How do you staff them? How are they working? What are the problems?

17. Does the program provide honors study? If so, what is its nature? How well does it work?

18. To what extent does the program contribute to the instruction of students in other undergraduate and graduate programs at OSU? In what other undergraduate and graduate programs does this instruction play a key role?

19. To what extent is there effective curricular interaction and cooperation with programs in other units of the University?

20. What is the potential of the program for generating new knowledge and for extending, reinterpreting, or applying existing knowledge?

21. To what extent does the program contribute to activities in basic research and scholarship at OSU?
22. To what extent does the program educate persons motivated to solve major societal problems? To what extent does it address socially relevant problems?

23. What are the markets for graduates of each degree program? What manpower needs are presently being met? Are these needs likely to change? How have the degree programs responded to changing manpower needs? How well does the program, at each degree level, prepare students to function outside a specific traditional profession?

Quality

24. How well is the program meeting its primary goals and educational objectives?

25. What are the overall strengths and weaknesses of the several components of the program?

26. What ought to be done to reshape the program's educational goals and objectives and their related activities to maximize improvement in the quality of the program and its components?

27. If the program or any of its components are subject to outside accreditation, what have been the results? Has the program become stronger or weaker since the last accreditation? In what way? What is the evidence?

28. If the program or any of its components have been ranked by a professional organization (e.g., ACE), has the quality changed since the most recent listing? In what ways? What is the evidence?

29. How are the course and other requirements for each undergraduate degree program determined? By what process? By whom?

30. How is undergraduate course content determined or modified? By what process? By whom?

31. In what manner are undergraduate students given an opportunity to suggest modifications and improvements in course content and requirements for degrees?

32. In what other instructional units do your undergraduate majors commonly take courses? Why?

33. When were undergraduate degree program requirements last reviewed? By what process? By whom? How often is this review conducted?

34. How are the course and other requirements for each master's degree program determined? By what process? By whom?

35. How is graduate course content determined or modified? By what process? By whom?

36. In what manner are graduate students given an opportunity to suggest modifications and improvements in course content and in requirements for degrees?

37. How are the course and other requirements for each doctoral degree program determined? By what process? By whom?

38. In what other instructional units do your graduate students commonly take courses? Why?

39. When were master's degree program requirements last reviewed? By what process? By whom? How often is this review conducted?

40. When were doctoral degree program requirements last reviewed? By what process? By whom? How often is this review conducted?

41. How does the program seek to provide sound academic advising for undergraduate students? How effective are the processes?

42. What is the general quality of instruction in the program at the various levels? How is this known? How is good teaching supported, evaluated, and rewarded?

43. Does the program employ the full range of instructional methods appropriate to its tasks? Explain.

44. How effective is the program's solicitation of student evaluations of teaching?

45. Has the program been effective in remedying instructional problems? What is the evidence?

46. How do undergraduate and graduate grades given in the program compare to grades given elsewhere in the University? Is sufficient attention given to the evaluation of students and to quality control? If not, what should be done?

47. What deficiencies, if any, exist in the breadth, balance, and coverage of course offerings and curricula? How should they be corrected?

48. What are the program's procedures for curricular and course development and approval? Are they effective? If not, what changes should be made?

49. Aside from UBER, what courses are designed for or are significantly used by majors in degree programs in other units? How well do they serve these students? What improvements should be made?
50. What is the nature and quality of instruction provided by other departments to students in this program's undergraduate and graduate curricula? Are there special strengths or deficiencies? Are the resources and strengths of other programs used to their full extent?

51. What is the opinion of OSU faculty in related disciplines concerning the scholarly activities of the program? concerning the program's courses and teaching?

52. Do OSU faculty require, or recommend the program's courses for their students? Do they refer applicants to the program's degree programs?

53. What roles do Graduate Administrative, Research, and Teaching Associates play in the program? How effective are they in these roles? How do their work assignments relate to the substance of their degree programs? What training, assistance, and supervision is given to these Graduate Associates? How is the performance of these Graduate Associates evaluated? What changes should be made in the assignments of Graduate Associates and in their training, assistance, and supervision?

54. At each level what do current students think of their courses? curricula?

55. At each degree level what proportion of entering students complete the degree program? How do you account for this proportion?

56. To what extent are graduates of each degree program successful in obtaining positions appropriate to the level of their education, training, and ability? in achieving productive careers? What is the evidence?

57. What assistance does the program provide to students in finding suitable employment? opportunities for further study?

58. What do graduates think of their degree programs? Do they refer applicants to degree programs? What do employers think of graduates of the degree programs?

59. Has the quality of graduates at each degree program level changed in recent years? How? If there is a change, how can it be accounted for?

60. In many disciplines there is a teaching service function usually involving introductory or basic courses. Anyone who plans an academic career is expected to be competent to teach these courses regardless of his or her own scholarly or research specialties. Does this circumstance exist in your disciplines? If so, how is this recognized and provided for in graduate programs?

61. To what extent is postdoctoral training an important activity in the discipline? In this program? What do current postdoctorals think of this program?

62. If one or more degree programs have entrance requirements above the University's requirements at the student's entrance level (e.g., grade point average, examinations such as GRE), what level of achievement is required? How does this compare with requirements at peer institutions? What fraction of applicants are admitted? What fraction of those admitted enroll? With which universities does the program regularly compete for entering students?

63. Why do students choose this program's degree offerings over other comparable opportunities? Why do students decline these offerings in order to enter other programs? Which programs and where?

64. What is the nature of scholarly, research, and creative work in the discipline?

65. What proportion of the faculty are productive in scholarly, research, and creative activities? How is productivity measured?

66. What is the quality of scholarly, research and creative work in the program? How is quality work identified, evaluated, supported, and rewarded?

67. What is the level of scholarly activity in the production of articles, books, and other creative work by faculty rank? How does this compare to peer institutions?

68. What professional honors and awards have been won by faculty in recent years? by students in the degree programs? by graduates of the degree programs?

69. By what criteria are the program's faculty known as leaders in the discipline, e.g., their ability to spawn new lines of scholarship, their interpretations and syntheses of the work of others, the achievements of their students, etc.?

70. What are the internal and external sources of support for the program's scholarly, research, and creative activities? Is this pattern typical of the discipline? If not, how are the differences accounted for?

71. Where it is appropriate, how successful are the faculty in obtaining external support for their research and other scholarly activities? What fraction of the faculty has such support? How does this compare to that of similar disciplines at OSU? at peer institutions?
72. What projects have been supported within the last five years? What projects are currently supported? What is the total annual dollar volume of outside support? How does this compare to peer institutions?

73. What success has the program had in obtaining support from alumni and friends of OSU?

74. To what extent are the faculty engaged in other professional pursuits? How successful are these activities? By what measures?

75. What are the faculty development activities in the program? How well do these work?

76. What are the criteria and procedures for faculty recruitment, evaluation, tenure, and promotion? How well do these procedures work?

77. From which institutions have recent additions to the faculty come? From which have faculty received offers in recent years? Where have they gone? Why have they gone? How do these institutions compare with OSU?

78. What is the general quality of the program's administration? How might it be improved?

79. How harmonious are interpersonal relations in the program? among faculty members? between faculty members and students? among students?

80. To what extent does a strong esprit de corps exist in the unit? a healthy environment for learning and scholarship?

Effective Use of Resources

81. What new or revised goals and areas of activity should be emphasized in order to give the program a distinguished rating?

82. How much additional financial support would be needed to make the program distinguished? What kinds of support? From what sources?

83. What activities in the program can be contracted or eliminated in order to release resources for the development or strengthening of other activities?

84. What things, other than providing more money, can be done by other departments, by the college(s), by the Graduate School, by the University administration to assist in improving the program?

85. To what extent do the program's goals and objectives govern its decisions on the use of human, physical, and financial resources? How might these resources be reallocated or reorganized so that they might be used more effectively?

86. How effectively do present administrative arrangements support the program's goals and their related activities? How might these arrangements be made more effective?

87. What mechanisms exist for the ongoing evaluation of the support for the program's undergraduate instructional programs by program administrators, faculty, and students?

88. What mechanisms exist for the ongoing evaluation of the support for the program's graduate instructional programs by program administrators, faculty, and students?

89. What human and material resources are devoted to the improvement of existing undergraduate instructional programs?

90. What human and material resources are devoted to the improvement of existing graduate instructional programs?

91. What guidelines are used to determine the teaching, research, advising, and service assignments of faculty members? How are these guidelines established? How effective are these guidelines?

92. What fraction of the faculty teaching assignments are at each instructional level? How does this relate to program goals and objectives? How does this relate to credit hours generated?

93. Are the student to faculty ratios at each instructional level appropriate? How do these ratios compare with those in similar programs at OSU? at peer institutions?

94. What is the distribution and proportion of courses and credit hours taught by regular faculty? by auxiliary or adjunct faculty? by Graduate Teaching Associates?

95. What provisions are made to improve the teaching, research, advising, and technical competence of the faculty?

96. What opportunities are available for assigned research duty (ARD), leaves, released time, etc., to pursue faculty development activities?

97. Are current library holdings and facilities adequate for the unit's programs? What additional library support is needed to help the unit's programs meet their objectives?
98. Is the current faculty adequate to maintain or achieve distinction in each of the program's activities? What additions or improvements are needed?

99. How appropriate is the present distribution of faculty ranks, ages, and specialties to the future development of the program?

100. How is research used as a teaching tool in the program?

101. To what extent is the present number of Graduate Teaching and Research Associates commensurate with the delivery of quality undergraduate instruction? with the program's research activities? with the job market for master's and Ph.D. graduates? with the general university responsibility to contribute to liberal education?

102. What fraction of graduate student support comes from OSU funds? from grants and contracts? How many persons are supported in each way?

103. To what extent are current physical facilities appropriate and adequate for current activities? for future goals? How do physical facilities compare with those at peer institutions?

104. Are current support staff adequate for the instructional, research, and service activities of the program? What improvements are needed?

105. What are the instructional costs in the program at each degree level? How do these compare with costs in similar programs at OSU? at peer institutions?

VI. The Memorandum of Agreement and Review Followup

After a review has been completed and discussed among the concerned parties--the program, the College Dean(s), the Graduate School, and the Office of Academic Affairs--a plan of action must be developed. We suggest that this plan of action be incorporated in a document entitled "Memorandum of Understanding". This memorandum should describe the goals and objectives the program seeks and the courses of action the program intends to follow in reaching those ends. It should contain a timetable for attainment and describe how the responsibilities will be shared among the concerned parties. The memorandum will serve as the understood position of all parties with respect to these goals and objectives and the plans for their achievement. Finally it will form a basis for measuring progress--a task which may well call for the good offices of the Coordinating Committee at a later time--and should, therefore, contain recommendations for subsequent evaluation.

Nature of the Memorandum

The memorandum of understanding is an informal document, evolving and subject to change by agreement among the parties as circumstances change. It represents a good faith intent to implement the plan, and each party to the memorandum should consider itself accountable for carrying out the provisions to the extent that it has control over the conditions required to achieve the planned results. However, the emphasis will not be on accountability but rather upon mutual understanding and cooperative efforts toward achieving agreed objectives.

As a working document rather than a formal plan, the memorandum probably should not be published. Publication implies a finality which can impede planning. Planning should be a dynamic process taking advantage of the most recent information and of the experience and knowledge gained in the total effort to improve our programs. However, the memorandum should be distributed to the concerned parties and be available to members of the university community who wish to examine it.

Development

The Program Review Coordinating Committee, working with the concerned parties, will be responsible for seeing that an appropriate memorandum is developed. It will also be the responsibility of that Coordinating Committee to see that the review follow-up procedures specified in the memorandum are carried out.

Content

The memorandum will contain a statement of program goals, the objectives specified to attain those goals, the activities designed to achieve those objectives, and the academic, administrative, faculty, staff, physical, and budgetary changes they will require.

We propose no fixed format. However, we recommend that, for each objective and in the discussion of how that objective will be met, the following be considered:

1. Impact on the student group affected in terms of number and quality.
2. Impact on faculty including change in assignment, the number and characteristics of the faculty.
3. Effect on program quality.
4. Effect on other parts of the total program.
5. Administrative or other organizational changes.
6. Impact on other units of the University.
7. Effect on budget.
8. Staff, physical equipment, facilities, library, and other support requirements.

9. A time schedule for meeting each goal.

10. Possible measures of success in meeting each goal.

11. Some sense of the priority to be attached to each goal.

An Example

As an illustration of such a memorandum of understanding we have attached (as Appendix D) a hypothetical statement generated at a university similar to The Ohio State University in size, scope, and purpose. This example differs in two respects from memoranda which will be typical here: first, the college as a review unit will be rare on our campus; and second, there are only two parties to this memorandum. There will typically be four parties to our agreement.

The major subdivisions in this hypothetical memorandum seem to be reasonable ones. In some fashion all these aspects of program improvement will usually require consideration. However, each program is unique and each memorandum should be organized to provide the clearest possible representation of that program, its goals, and of the plans designed to maximize the value and quality of the program and to make the most effective use of the resources of our University.

VII. Generalized Timetable

Since joint program review is an intricate process requiring the coordinated contribution of many persons, a rational order of events is necessary to ensure a thoughtful and worthwhile result. The procedures presented below illustrate a possible format that could apply to most reviews. As presented, the review itself is designed to be completed in three quarters (36 weeks total). Many reviewers will wish to do their work during an academic year, i.e. beginning at the start of an Autumn Quarter. If that is to be accomplished, experience indicates that it will be necessary to carry out the preparation activities during the preceding Spring Quarter.

### Preparation Activities

1. Representatives of the program, college(s), Graduate School, and Provost meet to discuss general features of the review.

2. Representatives of the college(s), Graduate School, and Provost meet with program participants to describe the review processes and discuss benefits, expectations, etc. Appointment of a Self Study Committee is invited on this occasion as are nominations for the Coordinating Committee.

3. The dean appoints the Self Study Committee.

4. The Provost appoints the Coordinating Committee.

5. Representatives of the Graduate School and the Provost meet with the Coordinating Committee and, separately, with the Self Study Committee to discuss features of the review, logistical support, timetable for the review, and other procedural matters.

### Review Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The Self Study Committee and the Coordinating Committee (or agreed-upon representatives of these groups) begin meeting together to determine the nature of the evaluation and report format.</td>
<td>1</td>
</tr>
<tr>
<td>2. Self Study is conducted and a draft report is prepared.</td>
<td>2-12</td>
</tr>
<tr>
<td>3. Meanwhile the issues to be addressed by the External Review are defined and the qualifications of the reviewers are determined.</td>
<td>2-4</td>
</tr>
<tr>
<td>4. The Coordinating Committee solicits nominations for the External Review Committee, clears the panel and dates with all parties, and determines the availability of potential reviewers.</td>
<td>4-6</td>
</tr>
<tr>
<td>5. The Provost formally appoints the External Review Committee and sets the dates for site visit.</td>
<td>7</td>
</tr>
<tr>
<td>6. The Coordinating Committee sends the self study draft to all parties for comment, and following appropriate consultation, the final self study report is prepared.</td>
<td>12-15</td>
</tr>
<tr>
<td>7. The Coordinating Committee sends the final self study report to all parties.</td>
<td>16</td>
</tr>
</tbody>
</table>
program participants, and to the External Reviewers. All also receive the charge to the External Reviewers which the Coordinating Committee has prepared.

8. Responses to the self study report by the various parties and program participants are sent to the External Reviewers and to the various parties to the review.

9. Visit of the External Review Committee. (2-3 days; if possible the External Reviewers are invited to stay for an additional day to prepare at least an initial version of their report.)

10. Report of the External Review Committee is received by the Coordinating Committee and sent to all parties for comment.

11. Coordinating Committee reviews the self study report, the external review report, and responses to each and designs and coordinates additional studies as necessary.

12. Coordinating committee report sent to all parties.


14. Followup and progress checks. as needed

VIII. Data and Descriptive Information

Although the emphasis of the self study should be on evaluation as distinct from data collection (see Section II), certain basic data and descriptive information will be needed by the various parties to the review, by the external reviewers and by the coordinating committee members as background for their work. In this section we list stores of data and descriptive materials which are readily available. The list also indicates where items can be obtained (P = Program, C = College(s), GS = Graduate School, OAA = Office of Academic Affairs). In some cases--where the "program" does not correspond to a standard administrative unit--data aggregation may require additional effort.

In addition, because the extent and quality of relevant library holdings are particularly pertinent to questions of program quality, the Director of Libraries has arranged to make available to self study committees knowledgeable librarians to aid in assessing program library needs.

The following list is illustrative rather than exhaustive. One of the goals of our early efforts at program review has been to identify data which should be routinely collected and studied. Some items will be more important than others and the determination of which data are pertinent--to be worked out jointly by the Self Study Committee and the Coordinating Committee--will depend on the nature of the program under review.

Provided by

1. General Descriptive Information
   a. Bulletin entries; departmental P brochures
   b. Program organization, committee structure and functions (Pattern of Department Administration)
   c. Ratings by professional organizations, e.g. ACE
   d. Accreditation reports P

2. Courses and Curricula
   a. Course catalog entry P
   b. Master schedule entries, recent quarters
   c. Credit Hours of Instruction, OAA by college, by department, by course level, for Su, Au, fiscal year.
   d. Distribution of Enrollment by Student Rank (by instructional college, by department, by course) for all recent quarters
   e. Quarterly Course Offerings OAA (by department, by course)
   f. Courses listed but not offered OAA (by department, by course)
   g. Grade distribution by college OAA of instruction (by department, by course) for all recent quarters
   h. Random sampling of individual C, GS undergraduate and graduate programs, illustrating major, supporting fields, length of degree programs in terms of...
credit hours and time to completion, etc.

1. Handbooks or other sources of information showing special opportunities and requirements of undergraduate and graduate degree programs, e.g., general exam requirements, graduate associate guidelines

j. List of continuing education and extension offerings and activities

3. Faculty

a. A list by rank of the program faculty, for five years, including a year-by-year schedule of new appointments, promotions, terminations, and resignations.

b. Resume for each current faculty member including age, academic rank, degrees with dates and awarding institutions, years on faculty, years on graduate faculty (with corresponding status), graduate advisees by degree and thesis title, current research projects, publications, teaching assignments with class size and type of instruction during the last five years, information on teaching effectiveness, pertinent committee and other University service, consulting activity, professional honors received, and service to professional societies

c. Statement of appointment, promotion, and tenure criteria and procedures

d. Graduate student enrollment report by advisor and department, most recent Autumn Quarter

4. Students

a. Data and descriptive information on service courses, e.g., who enrolls, purpose, etc.

b. Number of junior-senior majors and graduates for each of the last five years

c. Admissions profile on graduate students (undergraduate institutions, GPA, test scores), number of applicants, percent admitted, percent admitted who enroll; also on minority and women applicants

d. Masters and Doctoral Degrees Granted, by fiscal year, by department.

e. Results of written and oral general examinations and final examinations at the graduate level; doctoral examinations evaluations (by department).

f. Graduate Students receiving financial support, by type and source of support, Autumn Quarter, 1976 (by department)

g. Student placement information at each level, at time of graduation and subsequently

5. Budget, Resources, and Facilities

a. Expenditures, general funds, by college, by department

b. Funds received by the program from other sources, University and external (grants, contracts, gifts)


d. Current statistics on program faculty salaries (range, median by rank, etc.) including comparative data from other institutions

e. Autumn Quarter FTE Staff, by college, by department, by appointment category

f. Listing of support personnel including technicians, secretaries, etc. with brief description of function

g. Census of offices, teaching and research space

h. Description of major support equipment, instrumentation, computers

i. Library holdings, services, and resources as they relate to the program
Appendix A

The Ohio State University

Affirmative Action Policy Statement

"The policy of The Ohio State University, both traditionally and currently, is that discrimination against any individual for reasons of race, color, creed, religion, national origin, sex, age, handicap, or Vietnam era veteran status, is specifically prohibited. Accordingly, equal access to employment opportunities, educational programs, and all other University activities is extended to all persons, and the University promotes equal opportunity through a positive and continuing affirmative action programs."
Appendix B

Statement of Mission

The Ohio State University

Ohio State is the major comprehensive University in the State of Ohio. Through its central campus in Columbus, four regional campuses, Agricultural Technical Institute, educational telecommunications programs, cooperative extension service, and health care programs, the University serves the entire State of Ohio. As a major land grant university it is also a national resource. Its fundamental purpose-- in teaching, research, and public service--is to enhance the quality of human life through developing the individual capacity for enlightened understanding, thinking, and acting. Through the dissemination of knowledge, the University serves not only the individual but acts as a force to shape society for the common good. As such it is also a significant international resource.

The Ohio State University offers degree programs in a wide variety of disciplines, including baccalaureate and graduate programs in the liberal arts and sciences, in agriculture, in the various professional areas, and in the health sciences. As the major graduate institution of the State, The Ohio State University plays an important role in the generation of new knowledge through research and other creative work, and in the preparation of mature scholars. The University provides the only programs in the State of Ohio in Agriculture, certain of the Allied Medical Professions, Optometry, and Veterinary Medicine. By virtue of the quality and diversity of its instructional programs and resources, able students are afforded the opportunity to elect programs of unusual strength in the traditional university disciplines as well as interdisciplinary programs which reflect new ways of organizing knowledge and new approaches to contemporary problems.

Equality of opportunity is a basic philosophy of The Ohio State University. Mindful of the need for all persons to adapt to the changing roles and needs of society, the University also provides evening programs and continuing education opportunities to serve a wide spectrum of lifelong learning needs. In the exploration of new ideas and in the preparation of citizens for their roles in a changing society, the University represents a human commitment: an expression of the aspiration of people to better themselves and the world in which they live.
Appendix C

Inventory of Goals
The Ohio State University

PRIMARY GOALS

1. Instruction - To maintain and improve the quality and range of formal credit and non-credit instruction, evaluation, and certification:

   1. Undergraduate
      a. To assist the student in the development of an individual capacity for enlightened understanding, thought, and action.
      b. To foster literacy in English and other languages, articulation and clarity of expression, habits of disciplined critical thought, and powers of analysis.
      c. To foster an appreciation of our cultural, artistic, and intellectual heritage and of our natural environment and the scientific laws which describe it, and an understanding of human relationships and the dynamics of society.
      d. To assist the student to achieve depth of understanding and the ability to think and act confidently in at least one academic discipline or coherent interdisciplinary program.
      e. To provide an introduction to the exercise of scholarly inquiry, scientific research, and creative expression.
      f. To prepare students for advanced academic work in graduate, post-baccalaureate, or professional programs.
      g. To prepare students for specific technical, para-professional, or occupational careers.
      h. To provide supervised career-related experiences.

   2. Graduate, Post-Baccalaureate, and General Professional
      a. To provide advanced programs of scholarly investigation, fundamental research, and creative production in the Arts, Humanities, Social Sciences, Natural Sciences, and various applied disciplines.
      b. To provide advanced programs of scholarly inquiry which reflect new and interdisciplinary ways of organizing knowledge and approaching contemporary problems.
      c. To provide post-baccalaureate opportunities to enable students in areas such as the Allied Medical Professions, Business, Education, Engineering, and Social Work to develop professionally and/or adjust to the growth of knowledge and the changing needs of society.
      d. To prepare practitioners in the traditional professions of Dentistry, Law, Medicine, Optometry, and Veterinary Medicine.
      e. To provide career-related teaching, research, and professional service experiences for graduate, post-baccalaureate, and professional students.
      f. To provide post-doctoral and post-professional programs for scholarly inquiry and the development of skills in specialized areas.

2. Part-Time and Continuing Education

   a. To make degree and nondegree programs available to those in the community other than the traditional resident student.
   b. To provide access to undergraduate, graduate, professional and certificate courses on a part-time basis for adults who may or may not desire to work towards a degree or certificate.
   c. To provide opportunities for maintaining, advancing, and developing new knowledge and skills related to occupational and professional competence.
d. To provide opportunities for personal development through the acquisition of general or topical knowledge and the development of knowledge application, critical thinking and reasoning, communicative, motor, and creative endeavor skills.

e. To provide certification based only on examination performance and experience.

f. To provide programs which will be of assistance to public officials, industrial, business, labor and other community leaders to help them deal effectively with community-related programs.

g. To extend the teaching and research courses of the University to meet the unique educational needs of the broader community. This includes providing educational and certification programs away from the campus through such methods as extension, tutorial centers, independent study, and public television.

II. Research, Scholarship, and Creative Work

To enhance the discovery, organization, reorganization, interpretation and application of knowledge and of artistic production through programs:

1. Discovery
   a. To discover new knowledge by conducting basic research in the natural and social sciences, the humanities and the arts, and various applied disciplines.
   b. To discover new forms of artistic expression.

2. Organization, Interpretation, and Application of Knowledge and Forms of Artistic Expression
   a. To organize, interpret and apply knowledge to the formation and solution of specific problems.
   b. To organize, interpret and apply knowledge to the development of systems and products.
   c. To organize, interpret and apply knowledge to the creation of products and performances as examples of artistic expression.

3. Reorganization of Knowledge
   a. To find new relationships between existing theories, findings, and statements in order to present existing knowledge in more comprehensive or usable forms.
   b. To develop displays and performances to heighten artistic and cultural awareness.
   c. To improve the storage, retrieval, and dissemination systems for existing and new knowledge.

III. Public Service

To maintain and improve advisory, cultural, patient care, planning, testing, and implementation services to individuals, groups, agencies, and institutions outside the University:

1. Consulting, Advisory and Technical Services
   a. To help others to use existing knowledge.
   b. To provide specialized testing, evaluation, survey, and computational opportunities.

2. Cultural, Social and Information Services
   a. To foster artistic and cultural displays, performances, and broadcasts for the University community and the community at large.
   b. To provide or contribute to social and environmental programs.
   c. To make knowledge available to others through personal contact, publications, and broadcasting.
3. **Patient Care**
   a. To diagnose and treat human and animal patients in a training-related and advanced state-of-the-art setting.

**SUPPORT GOALS**

I. **Faculty and Staff**

To maintain and improve the necessary and appropriate environment and support:

1. **Personal Rights**
   a. To protect the right of faculty members to teach and publish unpopular or controversial ideas in their academic field.
   b. To assure the rights of women, minority, and handicapped persons to equal opportunities for employment and advancement.

2. **Institutional Climate**
   a. To encourage continuous experimentation, innovation, and evaluation as an institutional way of life.
   b. To recognize and encourage effective and efficient teaching, research, service, leadership, and management.
   c. To organize and assign responsibilities in such a way as to optimize the use of each person's special talents in the accomplishment of institutional objectives.

3. **Supplemental Support**
   a. To enable faculty and professional staff to optimize the performance of their duties through sufficient secretarial, clerical, and technical assistance.
   b. To provide ready access to materials, supplies, equipment, and information required to perform high quality work on a cost-effective basis.
   c. To provide offices, classrooms, laboratories, and specialized facilities that enhance the performance of scholarly or administrative work (including consideration of physical access, logical affinities to other areas, environmental conditions, and esthetics).
   d. To provide geographic and cultural access to ideas and physical phenomena through travel, visiting scholar, and visiting expert opportunities.

4. **Personnel Benefits**
   a. To provide salary, fringe benefits, and perquisites that will attract, hold, reward, and fairly compensate faculty and staff.
   b. To provide opportunities for personal development, advancement, and self renewal.

II. **Academic Program**

To maintain and improve the quantity and quality of, ready access to, and assistance in using scholarly materials, technological and artistic support services, and logistical support systems; specifically:

1. **Scholarly Materials**
   a. To provide students and faculty with the books, periodicals, statistical, visual, auditory, and other scholarly materials required by teaching, research, and service programs, and to provide for cost-effective acquisition, storage, display, and retrieval of these materials in both group- and self-study modes.
b. To provide students and faculty with the physical and animal resources required for academic work including such things as chemicals, cultures, lab animals, livestock, slides, etc.

c. To collect, display, and exhibit agricultural, artistic, historical, industrial, technological, and scientific products.

d. To enhance the storage and use of scholarly materials through libraries, museums, and demonstration areas, including consideration of physical access, affinity to academic program areas, environmental conditions, and esthetics.

2. Technical and Artistic Support Services

a. To provide access to and assistance in the use of computational services on a cost-effective basis.

b. To provide instructional technology in the direct support of academic objectives, e.g., instructional development, audio-visual service, computer-based learning, listening center, test scoring, and evaluation.

c. To provide artistic, editorial, reproduction, publication, and distribution opportunities that improve the dissemination of knowledge.

3. Communication and Logistical Support Services

a. To provide current and accurate information about academic offerings, opportunities, and resources including such things as course catalogs, research opportunity briefs, faculty directories, faculty interest and capabilities inventories, learning resource services catalogs.

b. To provide for the maintenance and easy retrieval of historical current records about academic programs including student, course, conference, research, and service project records.

c. To provide coordination and scheduling support for academic programs and for sharing resources such as classrooms and laboratories.

III. Students

To maintain and improve access, personal development, counseling, personal life, and student aid services in support of academic and career objectives; specifically:

1. Student Access

a. To maintain admissions policies which provide access to educational programs for any graduate of an accredited secondary school in the State.

b. To assure equal opportunity for achievement and meaningful educational experiences for all students including women, minorities, aged, physically handicapped, and educationally disadvantaged.

c. To provide honors programs which seek out and provide appropriate opportunities for students of high ability.

2. Social and Cultural Development

a. To contribute to the development of social, leadership, interpersonal, and citizenship skills and values through organized student activities, events, and sports.

b. To provide for and encourage participation in cultural activities and events such as individual and group artistic expression activities, concerts, lectures, art exhibits, and cultural exchange programs.
3. Counseling and Career Guidance
   a. To help students to identify their own personal goals and to develop means of achieving them.
   b. To assist students in selecting and undertaking academic programs that meet their personal and career objectives.
   c. To assist students in learning about, evaluating, and being placed in career opportunities.

4. Personal Living and Health
   a. To provide student housing opportunities that are conducive to academic work and social development while recognizing individual life styles and economic requirements.
   b. To provide convenient, nutritious, and economical food service.
   c. To provide for diverse and accessible recreational opportunities.
   d. To provide for physical and mental health care and diagnostic services.

5. Financial Assistance
   a. To assist students in determining financial needs and in meeting those needs through scholarships, grants, loans, work-study, and part-time employment.
   b. To solicit financial support for students from all sources and to distribute such aid in accordance with institutional and donor objectives.

6. Alumni
   a. To prepare students for life-long learning and provide such learning opportunities for former students.
   b. To maintain close contact with former students and to draw upon them for intellectual, financial, and evaluative support.

IV. Governance, Administration, and Financing
   To maintain and improve mechanisms for participative decentralized decisions; effective selection, operation, and support of programs; efficient administrative and service operations; accountability to various publics; and for acquisition of funds necessary to assure balanced, high quality, cost-effective programs; specifically:

1. Participation
   a. To provide for appropriate involvement of students, faculty, staff, administrators, trustees, and our various publics in the planning and policy-making activities of the University.
   b. To decentralize decision-making to the greatest extent possible while assuring individuals the opportunity to participate or be represented in decisions that affect them.
   c. To maintain a climate of open and candid communication, mutual trust and respect among students, faculty, staff, administrators, and trustees.

2. Effectiveness
   a. To achieve and to maintain a climate of high institutional prestige and pride, good facilities, and a high quality balance among all programs, taking into account University priorities and cost.
   b. To identify and to maintain top quality in the most important programs of the University.
   c. To provide cost-effective administrative, logistical, and business-equivalent services, taking into account the contribution of such services to the primary goals of the University.
3. Accountability

a. To interpret systematically the nature, purpose, and work of the University to citizens on and off the campus, and to provide concrete evidence verifying the attainment of stated goals on regular basis.

b. To ensure the favorable appraisal of those groups that validate the quality of programs offered by the institution.

c. To meet the program, fiduciary, accountability, and reporting requirements of external funding sources and regulatory agencies.

4. Financing

a. To seek the maximum possible amount of continuing, unrestricted resources from all funding sources except students in order to support all of the programs of the University.

b. To selectively pursue restricted and one-time resources in support of specific program needs of the University.

c. To balance the acquisition and use of resources in order to maximize the attainment of University goals, minimize the risks associated with loss of support, and preserve institutional autonomy.
Memorandum of Understanding, 1977-78 through 1981-82 (based on an actual document for a sister Big Ten University).

The purpose of this memorandum is to spell out a mutual understanding of some basic objectives to be pursued by the College of Pharmacy during the next five years and the steps to be taken to achieve those objectives. This document not only describes objectives and plans of the College; it also represents a bi-lateral commitment on the part of both College and the Office of Academic Affairs to make a good faith effort to implement these plans. It is an evolutionary agreement subject to change as events unfold, but only upon the consent of both parties.

I. College Mission and Objectives (From Phase I report)

II. Instruction, Research and Service Programs

A. Objective: To strengthen education for pharmaceutical practice through introduction of a Four-year Pharm. D. program.

Beginning in 1977-78 the College plans to phase-out its five-year Bachelor of Pharmacy program and its one-year Pharm. D. program, replacing both with a four-year Pharm. D. program. Students will not be admitted to Pharmacy as freshmen but only after two years of college. This revised curriculum is expected to improve the qualifications of students entering the College and better meet the future needs of society with respect to pharmaceutical practice. Phase-out of the two current programs and phase-in of the new program will be virtually completed by the end of 1981-82. The implications of various aspects of this change are in subsequent sections of this memorandum.

B. Objective: To strengthen the clinical practice component of the College’s instruction and research programs.

Both instructional workloads and research activities in the professional practice area need to be improved during the coming five years, and the College plans to effect these improvements through: 1) significant reductions in professional program enrollments; 2) selective increases in the number of faculty-practitioners and the quality of practice sites; 3) improvement in the research opportunities for pharmaceutical practice faculty, including collaborative research with basic scientists in the College and in other units; and 4) no reduction in full-time-equivalent faculty, but movement of one FTE from General Funds to other sources of support. This, together with the reduction in enrollment, will serve to reduce the effective student-faculty ratio from 19:1 to 15:1, most of this relief appearing in the instructional loads of the pharmaceutical practice faculty.

C. Objective: To maintain the quality and enrollment levels of the College’s current Ph.D. program.

The College is internationally known for its graduate program and the active involvement of Ph.D. students in the research of faculty. Within the constraint of constant resources, we can strive only to maintain our current level of excellence in this area of activity. Because pharmaceutical research is increasingly multi-disciplinary, means will be sought to support this program through joint appointments with other departments. We are currently discussing joint appointments with the Department of Medical Care Organization, School of Public Health, and with the Department of Internal Medicine, Medical School. During the course of the next five years we intend to make at least two joint appointments through faculty turnover. If additional General Fund or other resources can be found, we intend to work with other departments to increase the number of joint faculty appointments.

D. Objective: To improve the quality and efficiency of program delivery.

As part of its five-year program of comprehensive evaluation, the College will examine carefully the merits of establishing two departments, one in pharmaceutical sciences and one in pharmaceutical practice. If this organization promises improvement in the efficiency and quality of program delivery, the departmental structure will be implemented.
We shall also examine carefully the frequency of course offerings and multiple course sections, in conjunction with the initiation of the four-year Pharm. D. program. The combination of the new curriculum and the planned enrollment reduction should permit us to reduce the number of course-section offerings and assign reduced teaching loads. The planning target for this activity is to reduce course-section offerings by 6%, or the equivalent of one full-time teaching load. That released time is tentatively designated for allocation to improved career-education and student counselling as described in section III. Finally, we shall review the committee structure and committee assignments of College faculty and reduce both the number and size of committees where feasible. Committees will not be asked to meet unless there are specific agenda items needing attention and specific deadlines for completion of each committee assignment.

III. Students and Student Enrollment

A. Objective: To reduce over-all College enrollment appropriate to the objectives and new programs described in section I, above.

Beginning in the Fall of 1977 the College will no longer admit freshmen, phasing out the Bachelor of Science program over the following four years. At the same time the one-year Doctor of Pharmacy offering will be expanded to a four-year program, with students admitted in the junior year. Enrollments in other programs will be maintained at current levels. The College will seek to control enrollments to achieve the targeted levels described in Table I. These targets call for a total reduction of 20% in fall-term headcount enrollment by 1981-82, above and beyond the decline which will occur through elimination of lower division enrollments.

Experience indicates that we can attract more highly qualified students at the junior than at the freshman level, and this improvement represents one of our objectives in the student area. Performance will be monitored by maintaining data on student qualifications, as described in section VII. Our expectation is that approximately 75% of each incoming Pharm. D. class will be drawn from local applicants and approximately 25% from other two-year and four-year institutions.

B. Objective: To develop a better career education and counselling program for our students.

Guidance and counselling for both potential and enrolled students cannot continue on their present, informal basis. A committee has been charged with identifying specific improvements needed and developing a more formal program, as well as potential sources of funding. In the near future we shall act on the recommendations of the committee, within the availability of existing resources. Time equivalent to one additional FTE teaching staff member will be allocated to this improved service; the time will be released by a consolidation of offerings in the new Pharm. D. class scheduling, as described in ID above. We shall also aggressively seek outside sources of support for further expansion of this function. Counselling activities will include admissions counselling to local students, as well as other undergraduates considering application to the College.

C. Objective: To maintain current levels of minority and female enrollment in pharmaceutical practice programs and increase those enrollments in graduate pharmaceutical science programs.

Minority and female enrollment in pharmaceutical practice programs is currently quite high. Minority and female enrollment in pharmaceutical practice programs is currently quite high. On the other hand, we must ensure that women and minority graduates are encouraged to consider post-baccalaureate work in Pharmacy. While no specific targets for female and minority enrollments are projected, the College's success in this area will be monitored through the collection of trend data described in section VII.

D. Objective: To seek alternative funding sources to replace the present training grants of MS and Ph.D. students.

The declining availability of Federal training grants for graduate students continues. To remain competitive in attracting well qualified graduate students, we shall aggressively seek alternative sources to fund these students. The Office of Academic Affairs and the Graduate School will match new sources of graduate student aid secured by the College on a dollar-for-dollar basis.
IV. Faculty and Other Teaching Staff

A. Objective: To maintain the present number of teaching staff and increase by one the full-time-equivalent faculty supported from outside sources.

At present the General Fund supports 17.6 full-time-equivalent teaching staff members, 13.2 of these in the tenured ranks. This staffing results in a student-faculty ratio substantially higher than the average of peer schools of pharmacy. To achieve a reduction in the student-faculty ratio, the College plans to reduce student enrollments during the next five years and maintain the teaching staff at its current level. Concomitant with this reduction in the student-faculty ratio, faculty members, particularly those in pharmaceutical practice, will be encouraged to fund a portion of their academic year salaries through sponsored research projects. By the end of the planning period, it is anticipated that this increase in sponsored-research activity will offset a decline of one FTE supported by the General Fund.

B. Objective: To increase the disciplinary breadth of the pharmaceutical science faculty.

In June of 1979 a faculty position will be vacated through a retirement. As suggested earlier in this memo, the College hopes to make two joint appointments; one with the Department of Medical Care Organization and another with the Department of Internal Medicine. The ECO appointment is planned at the associate professor level, one-third in this College and two-thirds in the School of Public Health. Provided satisfactory arrangements can be made, the Internal Medicine appointment will be .60 in Pharmacy and .40 in the Medical School.

C. Objective: To maintain and if possible increase the number of minority and female members of the college faculty.

There exists a very limited pool of potential minority and female faculty members. However the College will aggressively seek to identify qualified persons and will take advantage of the University policy which funds, on a loan basis, appointment of highly qualified women and minorities when they are known to be available. Furthermore the College will monitor its performance in this area as described in section VII of this memorandum.

V. Other operational areas

A. Objective: To prevent further deterioration of instructional and research equipment.

Under the condition of constant resources, it will not be possible to improve materially the scientific equipment available to students and faculty. However the College will seek to maintain its current complement of equipment and will devote sufficient General Funds to purchase and maintenance to achieve that objective. In addition it will seek to improve the equipment situation through research grants and other outside sources.

B. Objective: To maintain non-teaching support staff at its current level.

During the next five years the College will give highest priority to reduction of its student-faculty ratio and an increase in faculty research activity. This priority precludes additional staff support, even though some is needed. While research activity may well include nominal funding for secretarial and other support staff, that funding will presumably be accompanied by additional workload.

VI. Financial Support and Reconciliation

The basic financial plan is designed to achieve the objectives described above through maintenance of the College's instructional resources at their current level, in terms of dollars of constant purchasing power. The only exception is central matching of additional student-aid dollars secured by the College.

Due to the decline in planned enrollments, General Fund fee revenues generated by the College will fall unless student fee rates are revised. To compensate for this potential loss in revenue, students in the initial two years of the Pharm. D. program will pay graduate fees; those in the last two years will pay fee rates equal to Public Health. The reduced program enrollment using current fee schedules would result in an annual reduction of student fee revenues of $92,000. The gain in student revenues by switching to graduate fees for the 3rd and 4th years and School of Public Health fees for the 5th and 6th years is $70,000. Thus the net loss through reduced enrollment and increased student fee rates is estimated at $22,000 per year.
The target General Fund budget figures in Table 2 reflect the $22,000 loss, as well as the equivalent loss of one FTE teaching staff member. To maintain the teaching staff at its current level, the College will seek to support the equivalent of one additional full-time faculty member from non-General Fund sources.

The Office of Academic Affairs will aggressively seek General Fund Support to accomplish these future budget allocations, after adjustment for University salary program and non-salary inflation-factor allocations.

VII. Analytical Information to be Available

A. Objective: To monitor College success in reducing its student-faculty ratio as described under section I.
   1. Fiscal-year-equated students per faculty FTE.

B. Objective: To monitor College success in meeting its enrollment targets and improving undergraduate student qualifications, under section I.
   1. Applications-Admissions-New Enrollment ratios by degree program.
   2. Grade point averages (for first two years of College) for those enrolling in Pharm. D. program.
   3. Actual enrollments relative to targets in Table 1.

C. Objective: To monitor student financial aid available to graduate students.
   1. Student Financial Aid by type of aid, source of aid, number of student recipients by degree program, and total dollars expended.

D. Objective: To monitor trends in the female and minority composition of the faculty.
   1. Regular Instructional Staff Headcounts, Annual Change, and Numbers of New Appointments and Terminations by Tenure Status, Sex, and Minority Status.

E. Objective: To monitor trends in the minority and female composition of the student body, particularly graduate students.
   1. Headcount Enrollment by Degree Level, Sex, and Minority Status.

F. Objective: To monitor achievement of the College's student counselling and career placement program objectives.
   1. % of Alumni in various types of Pharmaceutical and other careers by Years since Graduation (1, 5, 10, 15, etc.) and Level of Degree Conferred
   2. Sample surveys of student and graduate satisfaction with program.

G. Objective: To monitor trends and faculty research activity.
   1. Faculty FTE devoted to Organized Research
   2. Total Organized Research Dollars
   3. Annual evaluation of the volume and quality of faculty research output

H. Objective: To monitor trend in General Fund support.
   1. Actual General Fund dollars budgeted relative to targets in Table 2, after adjustment for salary programs and non-salary inflation allocations.
### TABLE 1

College of Pharmacy  
Target Enrollments, Fall Term Headcount  
1977-78 through 1981-82

<table>
<thead>
<tr>
<th>Year</th>
<th>Lower Division</th>
<th>Upper Division</th>
<th>Fifth Year</th>
<th>Sixth Year</th>
<th>Graduate</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
<td>% O.S.</td>
<td>#</td>
<td>% O.S.</td>
<td>#</td>
<td>% O.S.</td>
</tr>
<tr>
<td>1974-75</td>
<td>196</td>
<td>10</td>
<td>173</td>
<td>7</td>
<td>81</td>
<td>7</td>
</tr>
<tr>
<td>1975-76</td>
<td>208</td>
<td>8</td>
<td>177</td>
<td>9</td>
<td>84</td>
<td>9</td>
</tr>
<tr>
<td>1976-77</td>
<td>165</td>
<td>8</td>
<td>177</td>
<td>9</td>
<td>71</td>
<td>9</td>
</tr>
<tr>
<td>PROJECTED</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1977-78</td>
<td>-</td>
<td>-</td>
<td>146</td>
<td>9</td>
<td>73</td>
<td>9</td>
</tr>
<tr>
<td>1978-79</td>
<td>-</td>
<td>-</td>
<td>108</td>
<td>9</td>
<td>82</td>
<td>9</td>
</tr>
<tr>
<td>1979-80</td>
<td>-</td>
<td>-</td>
<td>97</td>
<td>9</td>
<td>30</td>
<td>9</td>
</tr>
<tr>
<td>1980-81</td>
<td>-</td>
<td>-</td>
<td>93</td>
<td>9</td>
<td>45</td>
<td>9</td>
</tr>
<tr>
<td>1981-82</td>
<td>-</td>
<td>-</td>
<td>103</td>
<td>9</td>
<td>48</td>
<td>9</td>
</tr>
</tbody>
</table>

O.S. = Out of State

### TABLE 2

Target General Fund Budgets  
1977-78 through 1981-82

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Personnel</th>
<th>Non-Personnel</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Academic AY</td>
<td>Support AY</td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td>FTE $</td>
<td>FTE $</td>
<td>FTE $</td>
</tr>
<tr>
<td>1970-71</td>
<td>13.2</td>
<td>214,680</td>
<td>3.0</td>
</tr>
<tr>
<td>1971-72</td>
<td>13.0</td>
<td>223,932</td>
<td>7.0</td>
</tr>
<tr>
<td>1972-73</td>
<td>13.7</td>
<td>261,205</td>
<td>7.5</td>
</tr>
<tr>
<td>1973-74</td>
<td>14.6</td>
<td>284,865</td>
<td>7.8</td>
</tr>
<tr>
<td>1974-75</td>
<td>14.4</td>
<td>302,080</td>
<td>7.6</td>
</tr>
<tr>
<td>1975-76</td>
<td>16.5</td>
<td>389,227</td>
<td>5.9</td>
</tr>
<tr>
<td>1976-77</td>
<td>17.6</td>
<td>418,254</td>
<td>5.6</td>
</tr>
<tr>
<td>1977-78</td>
<td>17.4</td>
<td>413,900</td>
<td>5.6</td>
</tr>
<tr>
<td>1978-79</td>
<td>17.2</td>
<td>409,500</td>
<td>5.6</td>
</tr>
<tr>
<td>1979-80</td>
<td>17.0</td>
<td>405,100</td>
<td>5.6</td>
</tr>
<tr>
<td>1980-81</td>
<td>16.8</td>
<td>400,700</td>
<td>5.6</td>
</tr>
<tr>
<td>1981-82</td>
<td>16.6</td>
<td>396,200</td>
<td>5.6</td>
</tr>
</tbody>
</table>

NOTE: Current dollars through 1976-77; constant dollars for forecast
Appendix H

References Used to Analyze Program Review Criteria
Listed in Chapter II (p. 51)


11. Wilson, R. F. Program evaluation at the University of Illinois at Urbana-Champaign. In R. Wilson (Chair), Evaluating academic programs: alternative purposes, procedures, and results. Panel presentation at the Association for Institutional Forum, Minneapolis, Minnesota, May 18, 1981b (mimeographed).
BIBLIOGRAPHY

Academy for Educational Development, Inc. Developing a process model for institutional and state-level review and evaluation of academic programs. Columbus, Ohio: Ohio Board of Regents, 1979a.

Academy for Educational Development, Inc. A strategic approach to the maintenance of institutional financial stability and flexibility in the face of enrollment instability or decline. Columbus: Ohio Board of Regents, 1979b.


Arns, R. G. An institutional context for planning. The University of Vermont This Week, February 17, 1978, p. 3.


Boulding, K. E. The management of decline. Change, June, 1975, pp. 8-9; 64.


Braskamp, L. Evaluation systems are more than information systems. Paper presented at the conference on conducting program evaluations and reviews in higher education, Clearwater Beach, Florida, January, 1981 (mimeographed).


Corey, S. E. Action research to improve school practices. New York: Teachers College Columbia University, 1953.


Dougherty, E. A. What is the most effective way to handle program discontinuance? Case studies from 10 campuses. Paper presented to the American Association of Higher Education National Conference, Washington, D. C., April 18, 1979a (mimeographed).


Dressel, P. L. Values (virtues and vices) in decision making. Paper presented at the conference on planning and conducting program evaluations and reviews in higher education, Clearwater Beach, Florida, January, 1981 (mimeographed).


Education & Economic Systems, Inc. Developing a process model for institutional and state-level review and evaluation of academic programs. Columbus, Ohio: Ohio Board of Regents, 1979a.

Education & Economic Systems, Inc. A strategic approach to the maintenance of institutional financial stability and flexibility in the face of enrollment instability or decline. Columbus: Ohio Board of Regents, 1979b.


Hull, M. H. The role of state constitutionally designated boards and commissions in the review of graduate programs. In Proceedings of the fifteenth annual meeting, Council of Graduate Schools in the United States, Atlanta, Georgia, December, 1975.


Johnson, R. M. On initiation, review and termination of graduate programs. Research in Review, November, 1974, 6(1), pp. 6-7 (Florida State University).


The Ohio State University. Council on Academic Affairs Minutes. March 6, 1974.

The Ohio State University. Statutes applying to the University, By-Laws of the Board of Trustees, Rules of the University Faculty. March, 1974.


The Ohio State University. Personal correspondence from D. A. Rigney to G. P. Crepeau, December 17, 1974.

The Ohio State University. Policy and Standards Committee Minutes. January 31, 1975.

The Ohio State University. Council on Academic Affairs Minutes. May 21, 1975.

The Ohio State University. Council on Academic Affairs Minutes. September 17, 1975.

The Ohio State University. Personal correspondence from A. J. Kuhn to J. B. LaPidus, October 28, 1975.


Poland, W. Program review at The Ohio State University. In D. DiBiasio (Chair), Perspectives on institutional program review: alternative methods and models. Panel presented at the National Conference on Higher Education of the American Association for Higher Education, Washington, D. C., March 6, 1981.


Scully, M. G. How to evaluate graduate programs. The Chronicle of Higher Education. December 6, 1976, 1; 11.


Sell, R. Summary of forum discussions. In S. S. Micek (Ed.),
Integrating academic planning and budgeting in a rapidly changing
environment: process and technical issues. Boulder, Colorado:

Shirley, R. C. & Volkwein, J. F. Establishing academic program
472-488.

Silverman, R. J. The student personnel administrator as leading-edge

The Sloan Commission on Government and Higher Education. A program
for renewed partnership. Cambridge, Massachusetts: Ballinger,
1980.

Smith, D. K. Multi-campus system approaches to academic program
evaluation. In E. C. Craven (Ed.), New directions for
institutional research: Academic program evaluation, No. 27.

Smock, H. R. & Brandenburg, D. C. Student evaluation of academic

Smock, H. R. Planning campus level program evaluation. Paper
presented at the conference on planning and conducting program
evaluation and reviews in higher education. Clearwater Beach,
Florida, January 1981a (mimeographed).

Smock, H. R. COPE: The evolution of a program evaluation system. In
D. DiBiasio (Chair), Alternative methods and models for
institutional program review. Panel presentation at the American
Association for Higher Education National Conference, Washington,
D. C., 1981b.

Smythe, C. M., Butler, P. W., Jones, A. B. & Wilson, M. P.
Departmental review in medical schools: focus and functions.
Journal of Medical Education, April, 1979, 54, pp. 284-293.

Sparks, D. S. The four "c's" of graduate program evaluation.

Stepsis, R. The emperor's clothes: the policies and process of
academic program review, 1978 (ERIC Document Reproduction Service
No. ED 167 049).

Stufflebeam, D. L., Foley, W. J., Guba, E. G., Hammond, R. L.,
Merriman, H. O. & Provus, M. M. Educational evaluation and


University of Minnesota, Department/program review procedures joint college of liberal arts graduate school protocol. June 14, 1974 (mimeographed).


Volkwein, J. F. Campus priorities and resources: the decision making process at the State University at Albany, 1975 and 1976, 1977 (ERIC Document Reproduction Service No. ED 154 733).


Wilson, R. F. Program evaluation at the University of Illinois at Urbana-Champaign. In R. Wilson (Chair), Evaluating academic programs: alternative purposes, procedures, and results. Panel presented at the Association for Institutional Forum, Minneapolis, Minnesota, May 18, 1981b (mimeographed).


Wright, B. T. Graduate program review at UCLA. In Proceedings of the 18th Annual Meeting of the Western Association of Graduate Schools, Monterey, California, March, 1976.