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A META-EVALUATION OF THE FIVE-YEAR REVIEW OF TECHNICAL ASSOCIATE DEGREE PROGRAMS CONDUCTED BY THE OHIO BOARD OF REGENTS

The Ohio State University

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A META-EVALUATION OF THE FIVE-YEAR REVIEW OF
TECHNICAL ASSOCIATE DEGREE PROGRAMS CONDUCTED BY
THE OHIO BOARD OF REGENTS

DISSERTATION

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

By
William Walter Miller, B.A., M.A.

*****

The Ohio State University
1982

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George P. Ecker
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Approved By
Adviser
Department of Educational Administration
To Dr. Max J. Lerner -
creative force, founder, leader, teacher,
father, and to my distinct honor,
friend.
ACKNOWLEDGEMENTS

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Finally, for the long days and evenings of sacrifice and hard work endured both cheerfully and competently, I thank Ms. Ellen Turner.
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CHAPTER I
INTRODUCTION

Evaluation is as central to the art and science of administration as diagnosis is to the practice of medicine. The expectation of evaluation is continuous and pervasive throughout the educational enterprise; instructors evaluate student progress; students evaluate their instructors; instructors evaluate each other; and administrators evaluate institutional environments, programs, staff, structure and themselves. The concept of evaluation within educational organization is not new. What is new, however, is the addition of an evaluative decision external to the institution, the state-level of evaluation of programs offered by state-assisted colleges and universities.

The Emergence of the State's Role in Program Evaluation

During the decade of the 1960's, American higher education underwent a subtle revolution in academic governance in nearly every state of the Union. By 1970, institutions of higher education which had existed for a century under their own governance found themselves subject to some degree of state planning and coordinating authority (Perkins, 1972). These planning and coordinating authorities were granted power and authority over matters which had previously been the exclusive and unreviewable responsibility of the institutions themselves. In most states, institutions could no longer unilaterally establish new programs, submit budget requests to state legislatures, redefine and expand their missions, and establish new campuses. Almost universally, state legislatures concluded that such decisions should be reviewed by a state agency specifically established for the dispassionate evaluation of such decisions with regard to the public interest generally and the educational needs of the entire state specifically. Among the responsibilities assigned to these agencies was the review and evaluation of programs for approval and continuation (Glenny, et al., 1971).
The Impetus to State-Level Program Review: Higher Education's Changing Environment

During the growth era of the late 1960's and 1970's, this burden of external program review and evaluation was easily borne by the institutions and lightly exercised by most statewide coordinating boards. Throughout the 1970's, however, states began to expect more from state program review for a number of reasons. The first of these was the sheer size and growth of the educational system itself. In 1961, four million students were enrolled in American colleges and universities; by 1976, enrollments had more than doubled to 9.5 million and expenditures for higher education had more than tripled, from $12 billion in 1961 to $41 billion in 1976. Obviously, over this period, per student costs had increased at a greater rate than enrollments themselves had, from $1,900 per full-time equivalent student to $3,100 per full-time equivalent student in constant dollars (Education Commission of the States, 1979a). The increasing size of the investments that states were making in higher education increased their sensitivity to the effectiveness of these expenditures, and resulted in calls for accountability systems including program review.

State-level program review received additional impetus as a result of increased demands upon state resources from competing social programs and priorities. Historically, education had been the sole "social service" program in which the state's interest was believed both valid and unquestionable. Efforts by both federal and state governments during the 1960's, however, to ameliorate chronic poverty, improve the plight of the elderly, assure the adequacy of medical care, and redress grievous deficiencies in the states' penal systems and mental health systems, significantly altered higher education's highly favorable budgetary position. New claimants upon state resources, with new programs and vocal constituencies for them, competed both directly and indirectly for the resources higher education had long believed un challengingly its own. To compete successfully for dollars, against the sick, the aged, and the poor, it became evident that higher education had
entered an era of being asked to demonstrate its previously assumed effectiveness. Commenting upon this radical change in higher education's competitive budgetary position, John Millett, the first Chancellor of the Ohio Board of Regents wrote:

No longer can higher education be presented to society as so good and so useful that its costs must not be compared with any other costs (of state government). Governments will ask increasingly profound questions regarding utility and costs (Millett, 1979).

Increasingly, program review and evaluation are seen as the means of effectively answering such questions.

Environmental changes of the recent past are not the only such changes prompting a greater emphasis upon program review; the uncertainties of its future environment also dictate such a review. Most thoughtful observers believe the environment of higher education in the 1980's will be characterized by the related problems of enrollment decline and financial retrenchment. The demographic bulge characterized as the "baby boom" of 1947-1961 is, for all intents and purposes, over. Planners also believe the increase in high school graduation rates, higher education participation rates, higher participation rates of women and older students, have either peaked or will have reduced impact accompanying a general decline in population. Larry E. Suter, Chief of the Education and Social Stratification Branch of the Population Division of the U.S. Bureau of the Census presented just such an analysis to a workshop sponsored by the Western Interstate Commission of Higher Education (WICHE) and the National Center for Higher Education Management Systems (NCHEMS) entitled, "Postsecondary Education Program Review" (WICHE/NCHEMS, 1980). Suter's projections indicate that nationally enrollments will decline by 15 percent by 1990. Far greater declines are anticipated in the Midwest and Northeast.

Furthermore, higher education has every reason to expect a decline in resources to accompany its declining enrollments, not only as a result of reduced fee income, but also resulting from anticipated reductions in federal categorical aid, the continuing though cooling ravages of
inflation, and a decreasing share of the state budget likely to be allocated to support higher education (Barak and Berdahl, 1978). Reduced state aid is nearly certain. Harold Geiogue, Principal Analyst for the Joint Legislative Budget Committee of the State of California, pointed out to the WICHE/NCHEMS workshop participants that state spending has two major functions, local assistance and major state operations. Local assistance programs (aid to cities, counties, and local school districts) consume two-thirds of a typical state's budget and are largely uncontrollable due to their nature as entitlement programs under either federal or state law. The remaining one-third of the budget must support all remaining state operations. Higher education stands out among all others as the most available target for cutbacks within this controllable one-third (WICHE/NCHEMS). While it would be tempting to engage in a demon theory, castigating state legislators and their analysts for motives and misunderstandings inimical to higher education, a look at the realities faced by the legislatures suggest a more sober view. As our population ages, priorities for social services will change accordingly. Higher education continues to be perceived as essentially a "youth program." Higher education is, therefore, not only the most conspicuous target for cutbacks, given the size of its demands upon the state treasury, but viewed as legislatures must view such matters, is possibly the most rational target, given changing demographics and expectations for social services.

Those who share this view of higher education's future short-term environment believe program review to be necessary and constructive strategic response to this future. According to Millett, the assumptions and realities of growth clearly fired higher education's viability, creativity and diversity throughout the 60's and 70's. The challenge of the 80's is to maintain viability, creativity, and to preserve diversity under assumptions and realities of stability or even reductions of scale (Millett, 1979). Indeed, given the likelihood of the above scenario, the very concept of stasis may be a meaningless
abstraction, particularly if inflation continues at present rates. Even with marginal changes in student enrollments, a dynamic and innovative institution will require either increased aid from the state, or an internal reallocation of resources to support any new improvement in quality or innovative program. Given the doubtful likelihood of increased state aid, internal reallocation of resources becomes the prime source of such budgetary flexibility. Program review is a mechanism which makes such flexibility possible.

Alternatives to Program Review

The alternatives to program review as a strategic response to the future are more frightening than the future itself. Some advocate doing nothing differently, and base their advocacy upon a denial of the premises advanced above. This position holds that the decline in the number of 18-21 year olds will be offset by a combination of deeper market saturation and broader appeal to adults who will attend colleges and universities throughout their entire lives. This will broaden the constituency of higher education and strengthen its political position in competing for larger shares of state budgets. Most state agency observers believe, however, that such a view is a combination of fantasy, diversion, and irresponsibility. Patrick Callan, Director of California's Postsecondary Education Commission, elaborates:

Each of us nurses the fantasy that the inevitable will befall the rest of the world, but that we will be miraculously spared . . . There's nothing wrong with such diversions unless they distract us from the facts and our responsibility. If we have a plan for a line that goes up, that's good, clean fun; but if we don't also have a plan for a line that goes down, that's irresponsible (WICHE/NCHEMS, 1980).

In Callan's view, program review is at the heart of "bearish planning" based upon conservative assumptions (p. 28).

A second alternative to program review in the face of financial construction, across-the-board cutbacks, has few advocates by many practitioners. Seductive in its simplicity, college and university
administrators more often than not, when confronted with a ten percent reduction in income, order a ten percent cutback "across-the-board," i.e., each program, department, and cost center in the institution is ordered to reduce its expenditures by the same amount. On balance, the utility of this approach is far less than its popularity. Critics grant that this approach accomplishes its objective with minimal delay and decisioning agony, but across-the-board cutting ignores questions central to the vitality of the institution, such as differential programmatic centrality to the mission of the institution, the long term future of the institution, and the differential impacts such cuts have on programs, students, and the educational goals of the institution (Barak and Berdahl, 1978). According to Donald K. Smith, Senior Vice President for Academic Affairs of the University of Wisconsin, such a strategy results in the inevitable weakening of the fabric of the college or university as a whole. "The obligation of the university," Smith writes, "is to search out those programs or activities which, however, valued, are less essential to its strength and nature than others, and to abandon or alter that which is of lower priority to protect the vitality of that which remains" (Smith, 1975).

From the state's perspective, two additional alternatives to program review exist. The first of these constitutes a laissez faire stance which would abnegate any responsibility for higher education and permit institutions to live or die in an atmosphere of unfettered competition. Arguments in favor of this Darwinian approach of survival of the fittest include the contentions that given full responsibility for their own survival, institutional vitality (and hence, viability) would be enhanced, responsiveness to changing educational needs assured, and continued accountability guaranteed, though shifted from the state to the student. Advocates maintain that such a policy would allow the market itself to make the decisions which must be made about institutional survival, and result in a system of higher education which, relieved of its weaker competitors for resources, would be stronger in 1990 than it is at present. Critics believe, however, the opposite would
result from such a policy, pointing out that without removing the pricing advantage currently enjoyed by the state-assisted institutions (which they claim would devastate public higher education) the independent system of higher education would be decimated in such an atmosphere. Critics also claim that more and more programs aimed toward attracting the same student would be offered by more and more institutions, compounding an already difficult problem of duplication, exacerbating already increasing costs, and leading to the homogenization, not the strengthening, of higher education. More fundamentally, however, opponents of the laissez faire approach seriously question the premise that the fittest would survive such an academic donnybrook, pointing to countless examples of inferior products driving superior products from the very markets upon the assumptions of which this approach is based (ECS, 1979a). One need not search long for examples within higher education itself of institutions having successfully adopted policies of misleading advertising, strategies geared toward reducing consumers' sense of product differentiation, the delivery of off-campus and "non-traditional" programs of questionable quality, and other such abuses designed to recoup enrollment losses.

At the opposite extreme lies the possibility the state legislature will exert direct control over the institutions to which they provide support through the centralization of control in one agency. Such direct control not only threatens academic freedom and diversity, but would reduce institutional flexibility to adapt to changing needs. A fifteen-member task force empaneled by the Education Commission of the States, comprised of six governmental representatives (governors, legislators, and budget officers), five representatives of state education agencies, three institutional representatives, and one representative of a regional accreditation association, was highly critical of the centralization of control by legislative fiat. The Task Force, chaired by Governor Brendan Byrne of New Jersey, noted that the actual result of such a policy would be opposite its intended effect:
Direct intervention by state legislators and by central state control agencies . . . shifts authority and responsibility from the institutional level to a higher level . . . Centralization may lead to detailed decisions being made by people who are removed from knowledge of the circumstances and who are not accountable for the outcome. Overreliance on centralization will, in the long run, lead to increased problems (p. 10).

In view of the available alternatives, the heavy preponderance of opinion within the leadership of higher education prefers to view program review and evaluation as the best means of assuring continuing viability, quality, and dynamism within the constraints of existing, diminishing (or at best, slowly increasing) resources (Barak and Berdahl, 1978).

**Background of the Problem**

For all the reasons cited above, the academy has increasingly recognized that program review will be a fact of academic life in the coming decades. Moreover, Barak and Berdahl's study (1978) of university administrators and state agencies responsible for higher education reveals increasing unanimity that program review must have both institutional and statewide dimensions, for while institutional program review is a necessary condition to assuring accountability and budgetary flexibility in the coming decade, it is not sufficient. As Chancellor Edward Q. Moulton of the Ohio Board of Regents had remarked, college and university faculties are the academic "centers of gravity" of the higher education enterprise. By their training and professional commitment, the faculty is ultimately responsible for the quality, health, and usefulness of an academic program. Of highly negative impact upon successful program review, conversely, would be a hostile, defensive, and demoralized faculty (Barak and Berdahl, 1978). Thus, successful program review must have an institutional component or level, but the establishment of an institutional program review process has not been seen as fully meeting the objectives and interests of state governments in program review for a number of reasons.
The first of these objectives and interests the state have which would not be served by purely institutional reviews is that of preventing unwarranted duplication or programs. The issue of duplication usually becomes important to an institution only when another institution within the state attempts to establish a program which competes for the same student market as one currently offered by the first. Absent a superordinate authority able to investigate and prevent such duplication, however, the first institution whose program is duplicated is powerless to defend itself. More to the point of program review is a situation in which two programs of the same type offered by two proximate institutions fracture between them a declining student market with the result that neither institution has an adequate level of enrollment to support the delivery of a quality program. Neither institution would be capable, under institutional review procedures, to resolve a problem which is inter-institutional in nature through the conduct of a lateral review, i.e., the review of all programs of a given type offered by all institutions in the state. A state-level program review is, therefore, within the interests of both the institutions and the state with regard to program duplication.

A second reason institutional reviews are insufficient in and of themselves is they lack the capacity or inclination for the articulation and defense of state interests. An institution does not necessarily have an inherent organizational interest in minimizing state expenditures for higher education nor has it any inherent interest in issues such as access or maintenance of the integrity of the state system of higher education through the prevention of unfettered competition resulting from expansions of missions. Even if they were to adopt such interests as their own, institutions would again be powerless to defend these interests effectively.

Third, program reviews conducted entirely by the institution having a vested interest in their outcome are seen by state legislators and state budget directors as lacking objectivity and credibility (Barak and Berdahl, 1978). As John Millett notes, state legislators have a
generalized concern that colleges and universities are wasteful, inefficient, and unduly expensive. They are fear more inclined to believe evidence from an agency to which governmental responsibility is assigned that this is not the case than from the "suspects" themselves (Millett, 1979).

Finally, given this legislative attitude, both Millett and Berdahl believe that program review conducted by the state higher education agency protects the institutions against far more potentially destructive governmental interference. The institutions and the state higher education agency share a common interest—the maintenance of the strength of higher education in the state. If the resources necessary to maintain this strength are to be forthcoming, legislators must believe in the demonstrations of accountability, efficiency, and effectiveness of higher education (Millett, 1979). The issue of credibility of the state agency (and hence, effectiveness as a buffer) is closely related to the realities of dependence. The continued existence of agencies such as the Ohio Board of Regents is wholly dependent upon their credibility, a fact well understood by legislators as well as by state higher education personnel. Lacking any natural constituency but the legislature itself, the state higher education agency must provide the legislature with information which is accurate and objective. As the ills of democracy are transformed into virtues by a brief consideration of the alternatives, a consensus is developing that statewide higher education agency program review is not only a necessary evil, but is also a positive good. As Berdahl writes:

Neither the organs of state government (legislative budget committees, executive branch budget directors) nor the institutions of higher education themselves are capable of conducting the finely balanced assessments involved in program review, the former because the issues are too complex for non-professionals to handle; the latter because their own self-interest inhibits their objectivity. Thus coordinating agencies, because they combine a statewide perspective with a specialized knowledge of higher education, have increasingly been called upon to play a central role in these decisions (Barak and Berdahl, 1978, p.9).
Theoretical Perspective

The developing body of theory relating to educational organizations provides an additional perspective with which to view state-level program review, and suggests theoretical reasons further to investigate this phenomenon. Karl E. Weick has characterized educational organizations as loosely coupled systems (Weick, 1976), joining James G. March and Michael D. Cohen in their view of the American college and university as organized anarchies (Cohen and March, 1975).

These anarchic theorists argue that the American college and university are organizational types which are very different from the view of organizations as monolithic and rational systems which emerges from traditional organization theory. Indeed, by traditional descriptions of organizations, they sometimes appear to defy being described as organizations at all. Nevertheless, organizations they are, but among organizations, they exhibit characteristics which are sui generis. If educational organizations are properly to be understood, these characteristics must fully be explored.

It is within the framework of this understanding of educational organizations that Karl Weick's characterization of them as loosely coupled systems can be seen as providing a useful perspective on state level academic program review. The essence of a loosely coupled system is an organization which is comprised of organizational units which interact with each other while retaining their own identity and separateness. Interactions and attachments between and among units are generally circumscribed, infrequent, weak in mutual effect, and in most cases, viewed as unimportant to the fundamental interests and drives of either unit which has been coupled. Couplings are, therefore, impermanent and easily dissolvable. One could argue that such a description of organizations is really not particularly unique to higher education; the same description could emerge from an examination of a corporate conglomerate or a multi-national corporation. What is unique to higher education, however, is the impotence of the two mechanisms which usually work in other organizations to hold the organization together to the
achievement of the goals of the organization as a whole. These two mechanisms are the task-induced demands of the technical core by which units are tightly coupled due to mutual or serial dependency for the production of a product, as within General Motors. The second coupling mechanism is authority of office, as in conglomerate corporations and the Roman Catholic Church. Neither of these mechanisms operate effectively within a university. According to Weick, therefore, an investigation of what is available as coupling mechanisms is an eminently practical question for anyone seeking to exert some leverage on such an organization.

Words such as "disorganized" and "anarchic," as well as the general view of educational organization which emerges from the above, are anathema to those adherents of a rational systems approach to all organizations. There is no reason to be defensive, apologetic, or horrified, however, by this state of affairs, for Weick identifies a number of properties of loosely coupled systems which are highly functional, particularly with regard to colleges and universities. Such systems are, after all, relatively impervious to specific environmental changes, and the effect of a total breakdown in one unit can easily be contained to only that unit. Tightly coupled systems, particularly as those couplings are effected by the demands of the technical core, cannot long survive such a breakdown in any one of its constituent units without suffering damage to the organization as a whole. A lengthy strike in the copper mines of Chile can bring General Motors to its knees, even though the deprivation of copper directly affects only the wiring used in new automobiles.

Similarly, a loosely coupled system permits localized adaptation to specific environmental changes with scarcely an organizational wrinkle, and multiplies exponentially the organization's capacity to sense the whole of its environment. A loosely coupled system also affords the organization the advantages of diversity in the search for solutions to organizational problems. Tightly coupled systems, particularly those which are coupled by authority of office, often deprive organizations of
this diversity and stifle creativity. Finally, loosely coupled systems are far less expensive to administer; coordination, control, and directive management are costly and divert resources from the product goals of the organization to system maintenance goals.

These advantages are important in educational organization, and any effort to tighten couplings should be carefully assessed against the risk of losing these advantages. Yet, loosely coupled systems have a number of dysfunctional properties which may not necessarily be inherent to their nature. The first of these is an absence of any selectivity with regard to the perpetuation of any constituent unit. Once a unit is established, it can survive forever without any further question of the extent to which it continues to contribute to the achievement of the organization's goals. Meanwhile, it continues to consume organizational resources. Loosely coupled systems are prone to faddism and the absence of effective quality control mechanisms. The result is a lack of product standardization, and as a result, a poor product from one unit can reflect negatively upon the reputation of the organization as a whole and its other products. Loose couplings, while they minimize organizational impacts of unit breakdowns, make repair of those breakdowns which do occur more difficult. Finally, resource allocation in loosely coupled systems is non-rational; an incrementalism which assumes the previous year's base reigns supreme.

It is within this context that program review both at the institutional and state levels can be understood. Program review is itself a coupling mechanism designed to redress the dysfunctions of loosely coupled systems in an environment which can no longer accept these dysfunctions with equanimity. Decrementalism is likely to replace incrementalism as the budgetary basic law. Budgetary coupling, though loose, is the only one of much permanence among the units of educational organization. Program review may be conceptualized as an attempt to develop a parallel coupling which would bring greater rationality to budgetary decision making, and by implication, make decoupling of a unit possible. It is an effort fundamentally to address the absence of
selectivity in the perpetuation of units in an otherwise loosely coupled system. Program review is also a means of disseminating solutions discovered by one unit to a troubled other one, and it is a means of enhancing the impact of otherwise autonomous actors on the health of units with which they may not currently be coupled to the benefit of the organization as a whole. It is also a means of responding to environmental demands for and organizational interest in an assurance that the products of each unit are of a level of quality worthy and preservative of the reputation of the organization as a whole. Even though loosely coupled systems are less expensive to manage than tightly coupled systems, the dysfunctions bear costs which need not be tolerated during an era of construction. Program review can, therefore, be seen as a coupling mechanism intended to minimize the dysfunctions of loosely coupled systems without basically altering their nature.

This study, therefore, addresses several of the research priorities identified by Weick. The first of these is a full description of such a coupling mechanism which has been operative in educational organizations for the past six years. The second is to explore in detail program review as a coupling mechanism designed to preserve loosely coupled systems by minimizing their dysfunctions. Finally, this study can demonstrate salutary effects to be achieved through the routinization of a coupling mechanism which leaves the loosely coupled system intact.

The Five-Year Review of the Ohio Board of Regents

As of its latest survey of the question in 1979, the Education Commission of the States reported that Ohio was one of 11 states having mandated statutory responsibility for the review of existing programs to its education agency. Three others lacked statutory responsibility, but conducted program reviews anyway as a matter of policy (ECS, 1979b).

In June of 1972, the Ohio Board of Regents adopted a revision of its rule regarding standards for the approval of associate degree programs (OBR Rule 3333-1-04) which included for the first time a requirement that
once every five-years, each state-assisted college or university providing technical education submit a review of each of its associate degree technical programs to the Office of the Vice Chancellor for Two-Year Campuses. Prior to this date, technical programs had been reviewed only in the proposal stage, with no regular follow-up by the staff of the Board to assess the continued need for the program after it had been initiated and operated for several years.

Technical associate degree programs remain the only programs at any level subject to periodic review after approval by the Regents, except for graduate level programs approved as pilot programs for specified periods. At the associate level, the review has been limited to technical education programs because of the generally accepted definition of technical education and the clarity of the objectives of such programs (the preparation of students for employment in technical and paraprofessional positions requiring up to two years of postsecondary education). Such programs are also more easily reviewed because of the clarity of and ease with which data can be collected for use in measuring program outcomes.

After a two-year pilot period during which review procedures were developed and field tested, the current procedure was initiated for the five-year period ending in July, 1975. Under this procedure, all state-assisted institutions offering technical associate degree programs were placed on a five-year review schedule. Annually, the Vice Chancellor for Two-Year Campuses has conducted reviews of approximately one-fifth of the programs offered by 49 institutions.

Section 3333.04(F) of the Ohio Revised Code authorizes the Board of Regents to conduct studies to determine what programs should be added to the curricula of individual institutions, and to recommend to the local boards of trustees "programs which could be eliminated because they constitute unnecessary duplication, or for other good and sufficient cause." The Board of Regents is further mandated by law to "promulgate rules, regulations, and standards relative to the quality . . . of instructional courses in technical colleges . . . and require conformity
to all such rules . . . as a condition upon the continued operation of such colleges." (Ohio Revised Code 3357.19[C])

In addition to the legal mandate, the Board of Regents views program review as a rational extension of program approval. At the time programs are submitted to the Regents for approval, institutions assure the Board that there is a need for a particular program and that the program being submitted meets the minimum standards of the Regents for technical education. In terms of need, locally conducted surveys project the existence of an adequate market demand for technicians possessing identified skills not currently being met. Also in terms of need, institutions make projections of a student market which is likely to be sufficient to cover the institution's cost of delivering the program.

With regard to the standards of Rule 3333-1-04, the programs submitted for approval have the required minimum of technical, basic, and general studies courses in their curricula. The Board is also assured of compliance with all other standards of Rule 3333-1-04, with regard to faculty leadership, facilities, and advisory committees. The Board of Regents approves new degrees and degree programs on the strength of such assurances, projections, and its current information. Program review provides the Board with an opportunity to revisit programs to see if the job placement and employment projections, on the basis of which the programs were originally approved, have actually materialized, and to assure that the programs continue to meet the minimum standards of the Regents.

On the basis of the explicit language of the Revised Code, the Regents have the authority to study programs, and to recommend to the institutional boards of trustees programs which could be eliminated because of unnecessary duplication or other good and sufficient cause. The process of the five-year review is designed to be such a study. The issue of duplication is explored when it is appropriate to do so, i.e., in those locations in the state where two proximate state-assisted two-year institutions offer the same program. The emphasis is placed upon a determination of whether the duplication is both "real" and unnecessary.
Programs at proximate institutions may share the same title while serving different occupational objectives. As such, the content or level would be different, and such programs would not be duplicative.

Renewed Emphasis and Planned Expansion of Program Review

In 1979, after four years of experience with the five-year review of technical associate degree programs and under the leadership of a new Chancellor, Edward Q. Moulton, the Ohio Board of Regents began to express increasingly strong interest in expanding its program review activities to baccalaureate and graduate degree programs. An impetus to its renewed interest was a report from its Management Studies Task Force in November, 1979, a task force comprised of the Speaker of the Ohio House of Representatives, the President of the Ohio Senate, six representatives of the public at-large (including representatives of industry, business, labor, the legal profession, and the press), and seven representatives from state-assisted colleges and universities. On the strength of two consultant reports it had commissioned (Millett, 1979 and Rovetch, 1979), and citing the anticipated changed environment for higher education discussed above, the Task Force recommended that "the Board pursue establishment of program review and evaluation procedures at the institutional and state level" (Management Studies Task Force, 1979). Program review has received strong support from the Chancellor of the Board of Regents, Edward Q. Moulton, who, in a letter to the members of the Board dated June 19, 1981, wrote, "I consider the five-year review to be integral to the work of the Regents. The experience we have gained through (this) process provides us with a useful model which will be helpful in our exploration of broadening the base of program review...I strongly support this effort."

The 1982 Master Plan for higher education in Ohio, currently in the development stages, will undoubtedly reflect this support and will call for the development of procedures for the review of all higher education programs in Ohio.
The Development of Standards for Program Evaluations

Concurrent with the emergence and articulation of state interests in program review and evaluation are developments within the field of educational evaluation itself. These developments also serve as important background to the subject of this investigation.

The demands which emerged in the late sixties and early 1970's for the specialized activities which constitute educational program evaluation created the need for professional expertise which had not yet fully developed. The field of educational evaluation had concentrated largely upon the assessment of students, not the programs in which they were enrolled. As a result of this relatively sudden (by academic measures of time) demand for accountability, individuals were being commissioned to perform program evaluations on the strength of their professional expertise in student measurement and testing. It soon became evident that the same processes were not appropriate. Sufficient time had not passed, nor had experience been adequate for the development of the internalized standards of performance which characterize a profession, according to W.R. Scott.

In 1974, it had become obvious to the Joint Committee on Test Standards, comprised of members of the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education, that the developing profession of program evaluation critically needed a set of standards to guide its development. In 1975, therefore, a separate Joint Committee from the three organizations was formed for the purpose of developing such standards. Guiding its early deliberations were severe attacks by clients and consumers of evaluations, and of education itself, its realization of increasing demands for accountability in educational practice, and the understanding that good evaluation contributes to the improvement of education while faulty evaluation can impair it. It set itself to the task of developing a set of professional standards which would upgrade the professional practice of educational evaluation—standards which had been non-existent prior to this effort. Among the benefits it hoped would derive from this effort were the development of:
a) a common language for use in facilitating communications among evaluators;

b) a set of rules for dealing with problems common to evaluation;

c) a conceptual framework by which to study evaluation;

d) a set of working definitions to guide research and development on the evaluation process;

e) a public statement of the state of the art in educational evaluation;

f) a basis for self-regulation and accountability by professional educators; and an

g) aid to developing public credibility for the educational evaluation field, which the Committee believed the field had been mortally lacking (Joint Committee on Standards for Educational Evaluation, 1981).

In short, the Committee set itself to the development of a profession possessing the specialized knowledge and internalized standards of performance it had heretofore lacked.

Under the chairmanship of Daniel L. Stufflebeam of Western Michigan University, the Joint Committee began its work in April, 1976. Its standards were developed and field tested by 1979, and after revision, were published in late 1980 under the title Standards for Evaluations of Educational Programs, Projects, and Materials.

Commenting on the forthcoming publication of the Standards, Stufflebeam once more told the Minnesota Evaluation Conference held on May 16, 1980, that evaluation is an emerging profession, and in view of the expensive and socially crucial nature of education, taxpayers both demand and deserve knowing if educational programs are efficient, effective, and accountable. He expressed his hope that the Standards, once tested and validated, would contribute toward assuring the public of a profession capable of providing them with such information (Minnesota Evaluation Conference, May 16, 1980).
Statement of the Problem

The problem to be investigated in this study, therefore, is three-fold. First is the need for meta-evaluative studies designed to test and validate the recently developed standards of the emergent evaluation profession. The second is the need to ascertain the strengths and weaknesses of the present five-year review of technical associate degree programs currently conducted by the Ohio Board of Regents for the purposes of identifying those elements of this review process which may be replicable in the proposed expansion of the Regents' program review activities to programs other than technical associate degree programs, and may be replicable in other states. The third is the need for a formative evaluation of this five-year review process which would enable the staff of the Board of Regents to improve and refine its current process. These three aspects of the problem will be discussed briefly in reverse order.

The five-year review process currently existing and described in the Regents' Operating Manual for Two-Year Campus Programs has been in place since 1974. It was developed, therefore, during a period when there were very few models in other states upon which to pattern such a review and during a period when the profession itself had not come to consensus on standards which should guide such efforts. According to Max J. Lerner, the Vice Chancellor for Two-Year Campuses (the originator of the five-year review in Ohio), the process developed intuitively and resulted from informal negotiations between himself and the presidents of Ohio's two-year colleges. The review which concluded in September, 1980, completed the first review cycle, i.e., all institutions offering technical associate degree programs have been reviewed at least once under the current process. The review process itself, however, has not been examined or evaluated since the initial negotiating process which produced it. Its strengths and weaknesses have never been systematically investigated with the goal of improving the process. This study proposes to be such an investigation. It is proposed as a formative evaluation, in Michael Scriven's terminology, aimed toward the development and improvement of a process currently existing and assumed to be
ongoing inasmuch as its conduct is currently mandated by Regents' Rule 3333-1-04. A formative meta-evaluation has not been done.

Secondly, renewed emphasis by the Board of Regents upon program review and the likely expansion of its program review activities described above strongly suggest that to the extent the current five-year review process is used as a model, that model should be of demonstrated effectiveness. The mere fact that it has been conducted for six years without a rebellion is not adequate evidence of either its worth or its replicability at other academic levels or institutional types. In this sense, therefore, this study proposes to serve Scriven's summative evaluative role, rendering a judgment regarding the worth of the five-year review process and describing just what the Ohio Board of Regents has learned about the conduct of statewide program review from the five-year review. A summative meta-evaluation has also not been conducted.

Finally, this study is proposed to address the needs of the developing evaluation profession itself. According to Nick L. Smith, President of the Evaluation Network, the field of program evaluation is in a pre-theory stage. In its current stage, Smith asserts, the profession has a critical need for studies and descriptive research in evaluation itself regarding the nature of the enterprise, the effectiveness of evaluations, and the utilization of the results of evaluations (Minnesota Evaluation Conference, May 16, 1980). Smith's comments echoed those of Stufflebeam written six years earlier who wrote that meta-evaluative studies aside from being a logical obligation (evaluators should evaluate their own work if they are legitimately to evaluate the work of others), are needed for the development of the field. "The state of the art of meta-evaluation," Stufflebeam wrote, "is primitive, and there is a need for both conceptual and technical development." Finally, one of the major purposes of the Joint Committee on Standards for Educational Programs in developing the standards was to stimulate inquiries as proposed here.
According to the Joint Committee on Standards, faulty educational program evaluation can impair the public's understanding and support of education, and can actually result in a decline in program effectiveness. A poorly conceived and conducted program evaluation is worse than no evaluation at all. In a seminal paper presented to the 1974 National Convention of the American Educational Research Association, Stufflebeam outlined some of the problems intrinsic to the art and science of evaluation which can sabotage the best intended evaluation and lead to these unfortunate consequences. These problems are conceptual, sociopolitical, legal/contractual, technical, administrative, moral/ethical, and utilitarian in nature.

Failure properly to conceptualize an evaluation is a fatal deficiency. A clear understanding of what evaluation is and what it is for must precede any such effort. There must be no ambiguity concerning the questions to be addressed or whose particular interests the evaluation is to serve. Failure to specify the standards by which the program shall be judged renders the process meaningless. Fundamental to conceptualization is agreement on the part of parties to the evaluation on who should conduct the evaluation and how it should be done. Without adequate conceptualization, Stufflebeam concludes, an evaluation cannot successfully proceed.

Sociopolitical problems can undermine the best conceived evaluation. In designing the evaluation the evaluator must involve all those whose cooperation is necessary to the successful conduct of the review; effective educational program evaluation, unlike fiscal audits, cannot be conducted in an atmosphere of distrust, opposition, and hostility without seriously impairing the access to the information held by the program operators. Full access to all pertinent information is a sine qua non of evaluation. Similarly, the evaluator must have both internal and external credibility. In the case of state-level higher education program review, both the institutions and the Board of Regents must have confidence in the competence, fairness, and objectivity of the evaluator conducting the review. Essential to this credibility is the assurance of
the security of sensitive data, knowledge of and respect for organizational protocol and effective public relations skills (pp. 27-35). Inadequate attention to such sociopolitical issues would make an effective program evaluation impossible.

If the evaluator has an erroneous or inadequate knowledge of the legal environment in which the evaluation is to occur, his report would at best be useless. Far worse than merely useless, it could be litigated on both substantive and procedural grounds, or the evaluator and his client could find themselves responding to a writ of quo warranto.

Technical deficiencies in the conduct of evaluation can be equally disastrous. Among the technical requirements necessary for the adequacy of evaluation, Stufflebeam lists:

a) clear identification of the objectives of the program to be evaluated and the variables to be assessed;

b) an appropriate investigatory framework or methodology for data collection;

c) appropriate instrumentation;

d) defensible sampling techniques, if used;

e) specified data gathering techniques;

f) provision for data storage and retrieval;

g) appropriate data analysis techniques; and

h) a clear understanding of what kind of reporting will be used and for whom (pp. 45-53).

Deficiencies in any of these technical requirements would undermine an evaluation.

Administrative problems can be equally destructive. Depending upon whether the evaluator is a consultant from outside the organization or is a member of the organization commissioning the evaluation, which is an organizational mechanism which must itself be appropriate to the evaluation, the organizational location and reporting relationship of the evaluator must be both clear and appropriate. Whether an "insider" or not, the evaluator must be fully familiar with the policies and
procedures of the client organization. Managerial details such as an adequate budget, adequate staffing, and rational scheduling can enhance or snarl an evaluation beyond remedy (pp. 53-62).

Evaluations have a moral dimension, the importance of which is nearly unique among types of systematic inquiry. Evaluations are based fundamentally upon normative statements of value. These values should be both clear and shared by all those participating in the review. Evaluation can easily be distorted by individuals with hidden agendas into an instrument of vengeance, punishment, bias, and abuse of discretion. To the extent the evaluator’s independence, objectivity, and neutrality can be assured in the conduct of an evaluation, such unethical misuse of evaluation can be prevented (p. 62). To the extent they are not, the evaluative process is dangerous.

Stufflebeam's final category of problems which can sabotage evaluation concern the utility of the evaluation. If the evaluation is perceived as fruitless or useless to the needs of those commissioning the evaluation, it will be viewed as an enormous waste of time by everyone connected with it. Similarly, if its costs far exceed the benefits derived from the evaluation, it will not be viewed as having been worth the effort (p. 62).

Given Stufflebeam's prominence in the field and his chairmanship of the Joint Committee on Standards, it is not accidental that the problems Stufflebeam categorized in 1974 heavily influenced the development of the Standards published in 1981. All the above criteria are addressed in the thirty standards, though three of the above categories are collapsed into one or more of the four categories within which the standards are organized: utility standards, feasibility standards, propriety standards, and accuracy standards.

Heretofore, the Ohio Board of Regents has not had any information upon which to base anything more than assumptions concerning the utility, feasibility, propriety, and accuracy of its five-year review process. That it has received no complaints in regard to these issues may have less to do with the review's adequacy than with its possible
ineffectiveness of a feeling by institutional administrators that they "can't fight City Hall." On the other hand, the process as currently conceived, designed, and implemented may meet the recently developed standards of the profession and may well be worthy of expansion to other academic levels and inspection by other state coordinating agencies. In either case, a framework for analysis now exists for gathering evidence on these matters. This study proposes to provide the Ohio Board of Regents with information with which to test its assumptions regarding the five-year review.

Research Questions

Four research questions will guide this investigation. The four are specifically referenced to the Standards for the Evaluation of Educational Programs, Projects, and Materials of the Joint Committee on Standards for Evaluations of the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education (1981). The major questions posed by the Standards . . . frame the research questions as follows:

R1 How useful do the participants in the five-year review of technical programs as conducted by the Ohio Board of Regents perceive it to be?

R2 How feasibly do the participants in the five-year review perceive the review to have been conducted?

R3 Has the five-year review been conducted legally, ethically, and with due regard for the welfare of those involved in the evaluation, as well as those affected by its results?

R4 How accurately do the participants in the review perceive the process reveals and conveys technically accurate information?

Answers to the above questions will result in a comprehensive meta-evaluation which would serve the interests of the Ohio Board of Regents in having both a summative and formative evaluation of its program review procedure, and would be responsive to the invitation of the Joint
Committee on Standards to try, review, and provide information upon which to improve the standards themselves as part of a continuing effort of many persons committed to advancing the practice of evaluation (JCS, 1980, p. xxi).

Definition of Terms

The meanings of a number of terms which shall be used in this study require some clarification. The object of this study is the five-year review of technical associate degree programs, which is a formal review conducted by the Ohio Board of Regents and described in Section 700 of its Operating Manual for Two-Year Campus Programs. The five-year review, as this process will be referred to, investigates the performance of technical instructional programs leading to the associate degree which are designed to prepare students for employment at the conclusion of up to two years of postsecondary study (OBR Rule 3333-1-04).

Review and evaluation have been used interchangeably throughout the literature concerning this subject and this study will be no different, despite the fact they are not identical activities by definition. Stufflebeam defines evaluation as the process of delineating, obtaining, and providing useful information for judging decision alternatives (in Worthen and Sanders, 1973, p. 129). When a distinction between review and evaluation is necessary, Stufflebeam's "Decisional" definition will be used. Review, on the other hand (again when a distinction is necessary), will be considered that activity preceding evaluation which consists of an analysis of the information available about the object of an evaluation (Rovetch, 1979).

Generally, such a distinction need not nor will not be made. Stufflebeam clearly identifies the collection and analysis of data about the object of evaluation as a component part of evaluation. Kelly and Johnston address the issue directly by noting that while not identical, evaluation and review are analogous. Like evaluation, program review is directed toward the development of publicly justifiable judgments of
worth. Practically speaking, therefore, program review is program evaluation (WICHE, 1980, pp. 57, 60). That evaluation is called "program review" is no doubt the result of the conviction of state-level boards that institutions will be more favorably disposed to the less emotionally laden and threatening term.

Meta-evaluation is simply the evaluation of an evaluation. More formally, meta-evaluation is defined by Stufflebeam (1974) as a procedure for describing an evaluation activity and judging it against a set of ideas concerning what constitutes good evaluation (p. 68).

Other terms and their meanings as used in this study are as follows:

- criteria - characteristics of programs believed to be important in producing a judgment of the worth of a program;
- indicator - evidence that is believed to be representative of a given criterion; and
- standard - a scale against which a program is compared with respect to a criterion discriminating between acceptable and unacceptable performance on that criterion.

Assumptions

In the conduct of this study, the following assumptions have been made:

A1 That the Ohio Board of Regents has a role in the conduct of program review based upon language currently existing in the Ohio Revised Code. In the absence of judicial ruling to the contrary, the legal authority cited by the Regents will be assumed.

A2 That all participants in program evaluation ought to be represented in its planning and subsequent evaluation.

A3 That institutional representatives selected to provide their professional judgment on the issues pertinent to this study will respond objectively.

A4 That consensus among the various constituencies of the review is a desirable but unnecessary condition, i.e., decision makers may make decisions in the absence of consensus.
A5 That the Standards for Evaluation of Educational Programs, Projects, and Materials indeed represent a legitimate and fair consensus within the evaluation profession concerning the manner in which evaluations should be conducted.

Significance of the Study

The significance of this study is implicit in all the foregoing. By way of summary, however, this study should have a significant impact upon the further development of the evaluation profession, the operations of the Ohio Board of Regents, the environment of postsecondary education in Ohio, and could have significant implications for the development of state-level program review in those states presently considering developing such review processes. Adequate discussion has already been given the needs of the profession for meta-evaluative studies. This would be one such study, the results of which would make a contribution to the limited research of this nature available.

As evidenced by the letter with which Chancellor Moulton transmitted the most recent report of the five-year review, he regards the five-year review process as a model upon which program review for other levels of higher education in Ohio can be based. A study of the effectiveness of this model will result in information the Board can use to capitalize on the strengths and avoid the weaknesses of the five-year review process in expanding it to other academic levels and broadening the coverage of the Regents' review activities. An examination of the adequacy of this model must precede its use as one.

Moreover, even if there is no expansion of program review to other academic levels, this study should have an immediate impact upon the state-assisted two-year college sector. The Regents cannot afford for a number of reasons to enter the decade of the eighties with a review process which may be unknowingly faulty. The contractions anticipated during the coming decade will severely strain inter-institutional and state office-institutional relations as the era of growth becomes an era of creative constriction. Critical attention will focus upon its processes of program review and efforts will be directed toward
subverting it. The Regents must have confidence their current procedures have none of the flaws identified by Stufflebeam as potentially fatal to effective evaluation or else opponents to review will have ample ammunition with which to sabotage the effort. As Michael Scriven notes, there is, of course, an intrinsic conflict between the evaluator and the person responsible for the program subject to evaluation. Often this conflict flares into a bitter attack upon evaluation itself as a rationalization of the anxiety provoked by the presence of an external judge who is not identified with or committed to the ideals of the program. If there is any rational basis for this opposition within the current process, the interests of the Regents in program review would be seriously impaired. Any weaknesses which have been good-naturedly tolerated in an atmosphere of increasing enrollments and resources will become monstrous intrusions and abuses of discretion in an atmosphere of decline. This study should help defend the interests of the Regents in program review by ferreting out the weaknesses in the current process.

A final implication of this study is its usefulness to the remaining 36 states which have not yet implemented a program review process at any level but are nearly certain to have done so by mid-decade. As one of the states with experience in this regard, Ohio's program review procedure may be viewed as a validated model worthy of replication. Unless it is indeed tested and evaluated, Ohio could well export to other states a fatally flawed system of review. This study will provide other states not only with a description of the five-year review but an assessment of those elements which have made it either successful or faulty.
CHAPTER II
A REVIEW OF THE RELATED LITERATURE

The review of the literature pertinent to this study will be organized in accordance with the specific standards of the Joint Committee. The standards themselves represent a distillation of the major research findings and professional judgments which have emerged over the past five years. Each standard will be discussed and its relationship to the five-year review explored. Those standards which have attracted significant comment in the literature of higher education regarding program review will be highlighted.

Audience Identification

All the utility standards are directed toward ensuring that an evaluation will serve the practical information needs of given audiences. Of first necessity, therefore, is the identification of the audiences of the evaluation. When more than one audience is identified, it is important to come to an agreement with the client regarding the relative importance of the various audiences and the information desired by each (JCS, 1980, p. 21 ff).

According to the "Final Report of the Five-Year Review . . ." presented to the Regents of June 19, 1981, two clear audiences and one diffuse one of the five-year review have been identified. The primary audience is the Board itself, the secondary audience is the participant institutions, and the third diffuse audience is the public at-large (pp. 3-9).

Distinctions among the audiences of state-level program review are important to make. Kelly and Johnston distinguish the client from the audience more clearly than do the Standards. The client is the person or entity needing the program review for specific information upon which to base a decision to be made. The audience consists of persons or entities having a stake in the outcome. Such a differentiation is important when
considering state-level program review; indeed the locus of decision making becomes crucial when clients (the Board of Regents) and audiences (the institutions) disagree about the decision (program continuation or inactivation) (WICHE, 1980). While Barak and Berdahl (1978) insist that institutional involvement in the state-level program review process is a necessary component, Rovetch (1978) points out that "no process can eliminate the built-in differences or antagonisms among the several constituencies that must participate if everyone is to accept the evaluation," and that the best one can hope for is a process which is able to "defuse major concerns and to accommodate as many minor ones as possible" (p. 4).

As for identifying information needs of the respective audiences, Millett (1979) writes that a statewide program review should be designed to provide the state agency with evidence that:

a) enrollment and service needs are being met in terms of geographic access, economic requirements, and individual satisfaction on a statewide basis;

b) program objectives are being attained;

c) programs are not unduly duplicatory;

d) institutions are not pursuing more costly programs than are needed to meet enrollment and service needs; and

e) program costs are reasonable in terms of mission and program objectives (p. 8).

There are, of course, a number of other potential audiences of the five-year review, including the state General Assembly, the Legislative Budget Office, the Office of Budget and Management, and all the institutions, whether participating in the current review or not. Rovetch (1979) suggests, however, that while the legislature may be an appropriate audience, it will not likely be a particularly attentive one:

Legislators generally give proportionately more weight to their personal knowledge of institutions within their district, or of the state's leading university, than to however many reports from the Regents . . . Decisions made following the most cogent analysis of
performance data as related to budgeting may be reversed when an attempt is made to implement them in the budget for an individual institution. (p. 5).

It is clear that the standard of audience identification is appropriate to this study and the extent to which the audiences and their information needs are identified should be assessed.

Evaluator Credibility

The standard regarding evaluator credibility states that the evaluator(s) should be both trustworthy and competent to perform the evaluation, so that findings achieve maximum credibility and acceptance. According to the Joint Committee, evaluators are credible to the extent that they exhibit the training, technical competence, substantive knowledge, experience, integrity, public relations skills, and other characteristics considered necessary by the client and other users of the evaluation reports (JCS, p. 24).

The issue of evaluator credibility is particularly salient to the conduct of state-level program review. As W.R. Scott points out, professionals such as college and university faculty are characterized by the conviction that they can only be legitimately evaluated by their peers. Peer evaluation is fundamental to the creed of academe. A state-level program review, conducted by the staff of a state agency, therefore, could well be regarded as academic apostasy.

It need not be so, but state agencies planning and implementing program review have had to wrestle with the angles on this issue and the results of the matches have been mixed. According to Barak and Berdahl (1978) four approaches to addressing evaluator credibility in designing state-level reviews have emerged.

The first such pattern is a review which is institutionally oriented. Such an approach commends programs to the mercies of institutional colleagues, if not professional peers, and confines state-level activity to providing guidelines, scheduling, setting deadlines, and filing the reports of the reviews conducted by the institution
itself. While this light-handed monitoring of institutional reviews is the least objectionable to the faculty of the institution, what the process gains in internal credibility it loses in external credibility. Legislators simply do not believe that the academic gentlemen's club is capable of skewering one of its members when the chips are down. Aside from lacking assurance of objectivity, such an approach has been criticized as eliminating the possibility of lateral reviews addressing the issue of duplication and as not really comprising state-level review in view of the absence of a statewide perspective (pp. 75f).

A second pattern is best exemplified by the review process sanctioned by Kansas. An inter-institutional review committee consisting of the chief academic officers of all the state institutions conducts reviews of programs flagged for review by the state agency. State agency staff serve on the committee ex officio, and may issue a separate recommendation. The inter-institutional committee is a source of credibility, legitimacy, and institutional involvement, but Barak and Berdahl identify a number of problems possible to such an approach. Such committees can fall victim to the vagaries of inter-institutional politics. When logrolling, horsetrading, bloc voting, and partitioning of the state begin to occur, statewide interests are lost in the smoke-filled room (pp. 41f). When this occurs, the process loses both the internal and external credibility the process is designed to optimize.

A third attempt to assure credibility is the selection of out-of-state consultants. In a procedure which has been used in New York, Louisiana, and Illinois, names of potential consultants are solicited from the institutions and accrediting associations from which the state agency selects a five member review team, which visits the sites of the program under review and reports to the state agency. This approach is clearly the most professionally acceptable, and generally enjoys high external credibility. There are, however, some significant deterrents to widespread use. Outside consultants by definition frequently lack knowledge of the inter-institutional relationships and general knowledge
of the state's peculiar context. Knowledge of both can be important. Furthermore, while such consultants could be expected to apply professional standards of quality to the programs under review, traditional measures of quality do not generally address issues of unique state concern, such as access. As Millett (1979) notes, peer review is good for quality assessment, but is not particularly useful in determining program need, access, or cost. Finally, some review teams consisting of outside consultants find curricular meddling a temptation impossible to resist, and as a result engage in an attempt to "fine tune" programs into curricular patterns to which they have either a personal or professional bias. The most significant deterrent to this approach, however, appears to be cost (Engdahl and Barak, WICHE, 1980). New York estimates its consultant review program has cost the state approximately $30,000 per discipline (Barak and Berdahl, 1978, p. 78f). If one-fifth of all discrete technical programs in Ohio were reviewed each year in this manner at this rate, the costs of program review would approach $1 million.

The final approach used by the states is the conduct of the review by agency staff. Intrinsic difficulties of low internal credibility and high confrontation potential place a premium upon the selection of qualified state staff to conduct these reviews. Barak and Berdahl suggest that the individuals selected for this task must have significant prior experience within academe as a teacher or else risk charges of a lack of sophistication and simplistic treatment of data. The opposite extreme, however, is equally dangerous. A state-level staff which is too academic might lack adequate appreciation of the need to give public interests priority over institutional interests (p. 88). Most of the remedies developed by the states, however, to cure the potential problem of evaluator credibility as alternatives to agency staff review, appear to be worse than the disease itself.

Ohio's five-year review fits squarely in the fourth pattern. The five-year review is conducted by the Vice Chancellor for Two-Year
Campuses and the Administrator for Two-Year Campus Programs, his assistant. Clearly, however, the standard of evaluator credibility should be applied to the five-year review to determine the extent to which this approach weakens the process.

**Information Scope and Selection**

The third utility standard states that the information collected for the evaluation should be of such scope and selected in such ways as to be responsive to the needs and interests of specified audiences. All information requested must be pertinent to the purposes of the evaluation (JCS, 1981, pp. 27-29).

Many view this standard as addressing the "mother lode" of any evaluation. Under this general heading are contained such questions as the purpose of the evaluation, the selection of criteria for review, and the appropriateness of the performance indicators selected and standards of performance on these criteria. Weaknesses in this area would strike at the heart of program review. Not surprisingly, considerable attention has been devoted in the literature to these issues.

According to Stufflebeam, the information collected for an evaluation must be appropriate to the type of evaluation it is (context, input, process, or product) (in Worthen and Sanders, 1973). By Stufflebeam's definition, state-level program review is a product evaluation in that it provides information for deciding to continue, terminate, modify, or refocus an educational program. Doing so requires an operational definition of the objectives of a program, the measurement of criteria associated with the objectives of the activity, comparing these measurements with predetermined absolute or relative standards, and finally, making rational interpretations based upon the foregoing steps (pp. 136-138). In state-level postsecondary program review there are landmines buried deep within each of these.

The difficulties begin with the first stage—identifying program objectives. Academicians are reknowned for their resistance to being
asked to specify in advance what it is they intend to do, but if forced to do so, they can develop a set of program objectives vague enough to defy any attempt at operational definition. Indeed, a survey conducted by the Education Commission of the States found the difficulty of defining goals in a clear and acceptable manner one of the major problems encountered by states in implementing program review (ECS, 1979, p. 20).

The second stage of Stufflebeam's process is somewhat less an intractable problem in that the criteria upon which programs are reviewed are generally specified by the state agency. The criteria used most frequently by the states are productivity, program cost, quality, and need (Barak and Berdahl, 1978). The selection of indicators of acceptable performance on each of these criteria, however, and obtaining institutional agreement upon them, as recommended by Engdahl and Barak (WICHE, 1980), can be problematic. Certainly these observers are correct in asserting that such agreement on the criteria would help avoid later conflict and dissatisfaction, and application of previously adopted and agreed to criteria would help assure equitable evaluations of all programs being reviewed (p. 130). But the literature is clear that agencies must exercise caution in both the selection and application of its review criteria, as well as indicators chosen to be representative of the criterion.

Productivity is a common criterion, but as Barak and Berdahl point out, undue emphasis upon productivity can lead to negative results. A program identified as being underproductive, as measured by numbers of graduates, may become a degree mill as faculty attempt to save the program by lowering admissions standards and easing grading practices (p. 74).

The criterion of program cost is relatively clear-cut in comparison, although failure to assess the costs in relation to the benefits of a program could lead to misinterpretations in the fourth step. Indicators of program cost are also relatively clear cut, including actual and projected graduates, enrollments, and credit hours generated relative to
the costs of faculty, equipment, and academic support. In addition to these, the economies which could reasonably be expected to result from consolidation or elimination of a program must also be investigated under this criterion or else the recommendation to eliminate a program may appear an exercise in paper shuffling (Engdahl and Barak, WICHE, 1980).

The most difficult criterion is that of quality. Millett (1979) argues cogently that the state should not make an independent assessment of quality, but should require the program to be accredited by an appropriate professional accreditation association. He supports this argument by noting that the expertise required for arriving at an assessment of program quality is beyond the state's staffing capacity, and that even if it were not, the state should not duplicate already existing quality assessment techniques (p. 120). Millett is not without contradiction, however. The Task Force of Accountability of the Education Commission of the States finds grave faults with the use of accrediting associations to serve state interests in assuring quality (ECS, 1980). The Task Force points out that accreditation is not a public process nor are the reports resulting from the process public documents. Reports are sent to the institutions concerned, where they remain; the result is an external credibility of zero. Similarly insensitive to the need for external credibility is the fact that accrediting associations are by definition controlled by the institutions and professionals whose programs would be reviewed. The aggregation of these professional and institutional interests do not necessarily address or equate to the state's interest in program review. Finally, the Task Force noted that standards vary widely from accrediting group to accrediting group, and some accrediting associations may have goals which actually conflict with state goals, e.g., low faculty-student ratios conflict with state goals of the best delivery at the lowest cost (p. 12). It is not surprising, therefore, that Barak and Berdahl (1978) found that most states do not even purport to examine
qualitative factors. Virginia makes a point of noting that its review is quantitative, and qualitative review is an institutional responsibility. Florida describes its review as "quantitative from which indicators of quality can be gleaned." New York is almost alone in identifying quality assessment as the primary goal of its review (p. 90). The Ohio Board of Regents has to date declined to involve itself in quality assessment by frontal attack, stating simply in its 1976 Master Plan that "the primary responsibility for quality control rests with each individual (college and) university" (OBR, 1976). Not only is agreement on this criterion difficult to achieve, but the selection of performance indicators of the quality of over 150 discrete technical associate degree programs would severely strain the five-year review process and current staff resources. For these reasons, the five-year review has frequently concealed this criterion with the explicit criterion of effectiveness, as measured by the rate of graduates finding employment in positions related to their training.

Program need, the fourth common criterion, is probably the one upon which greatest emphasis has been placed. The need to assess the continued need for a program is also the most easily accepted as appropriate to the Regents' interest in program review by the colleges and universities. Even this criterion, however, is not free of potential problems, most of which center upon the appropriate selection of indicators of program need. Most observers agree that the extent of student interest (or in Scriven's terminology, "program attraction") as measured by enrollments, is an appropriate indicator of program need. Disagreements occur, however, in selecting the enrollment standard, i.e., how many students are enough to demonstrate sufficient student interest? Answers range from the biblical "when two or three are gathered together" to specification of adequate numbers during each year of the program (x freshmen, y sophomores). Another indicator is the adequacy of the labor market demand for the program's product as measured by the graduate job placement rate, unless non-employment objectives
have been clearly articulated and accomplished (Millett, 1979). This indicator has been termed "crucial" by the Regents' personnel responsible for the five-year review of technical programs, and to date these individuals have not accepted the legitimacy of non-employment objectives in view of the clear employment emphasis of technical education. Both of these indicators can objectively be measured; remaining indicators of need become increasingly subjective. Least so of the remaining indicators is the contribution or importance of a given program to other programs offered by the institution. Even though there may no longer be a significant demand for draftsmen in a particular area, for example, the courses comprising the drafting program may be essential to programs in civil engineering technology, mechanical engineering technology, or electrical/electronics engineering technology, for which the need is significant. A more subjective indicator of need is a program's value to society as a whole. While the need for political scientists or philosophers may be difficult to justify in terms of enrollments or market demands, the value to society as a whole of programs which provide the basis for scholarship in the nation's political affairs or ethics, say, may be judged sufficiently compelling nonetheless. The most subjective indicator of need (and the most suspect because it is at once the most potentially self-serving and the most irrefutable) is inherent value. Abandoning any instrumental arguments, program faculty frequently justify their programs on the basis of an assertion that the study of x, y, or z is a good and needed activity for its own sake.

A fifth criterion, duplication, is closely related to the preceding and is often collapsed within the criteria of cost and need. Determining when duplication is a problem has itself been problematic, but a model developed by Martorana and Ruhns (1977) focuses upon a comparison of programs with the same HEGIS codes with regard to indicators of geographic coexistence, availability, graduate production, similarity, institutional need or dependence upon the program, and student and labor market demand for the program. The mere fact of duplication, or
"geographic coexistence," is not sufficient upon which to base any conclusions. As Millett (1979) notes, the assignment of similar missions and the delivery of similar programs by various institutions does not necessarily constitute duplication in conflict with state interests. Problematic or unwarranted duplication exists when two or more institutions offer the same program to a limited clientele in a limited geographic area.

The literature is nearly unanimous in cautioning the states against the application of only one of the above criteria. The ECS Task Force on Accountability wrote:

Because of the partial nature of the measures (of goal achievement) progress toward achieving some of the goals cannot be determined very precisely. Officials should use caution in basing decisions on the results of a single assessment... Whenever possible, multiple measures, supplemented by the judgments of experts, should be used in assessing goal progress (ECS, 1979a).

Barak and Berdahl (1978) provide an apt example of the deleterious effect of exclusive reliance upon one such criterion, productivity, which could easily result in a dilution of quality by easier grading standards and lowered admission standards. "It makes little sense," they wrote, "to drop a program bordering on being of 'degree mill' standards untouched" (p. 88).

Of the above criteria, the five-year review as currently designed directly addresses the criteria of need, effectiveness (rather than quality), and productivity. It infrequently addresses the question of duplication, doing so only when two institutions in the same area happen by accident to be scheduled for the review in the same year. Addressed indirectly is the criterion of cost, although fiscal implications have been at the foundation of concerns raised regarding enrollments. Obviously, an assessment of the performance of the review with regard to the standard for information scope and selection is appropriate. Indeed, it is crucial.
Valuational Interpretation

The fourth utility standard relates to the perspectives, procedures, and rationale used to interpret the findings of evaluations. These should be carefully described so that the bases for value judgments are clear (JCS, 1981).

There are a number of alternative bases for interpreting findings. An evaluator can choose to assess program performance against program objectives; procedural specifications; laws, rules, and regulations; democratic ideals and social goals; performances by a comparison group; the assessed needs of a consumer group; and a number of other value sets. Regardless of the value set selected, evaluators should be clear about them and it should be clear as to whose value set will have primacy in the interpretation of the findings. The values selected must be appropriate to the individuals who are to make the decision the evaluation is designed to serve, and that locus of decision making must be viewed as appropriate (pp. 32-33).

Obviously, there is ample room for controversy in the application of values to the assessment of educational programs. It is surprising, therefore, that so little has actually occurred. Most of the outright disagreement relates to the comparative merit of judging programs by their own objectives, judging them by comparison to an exemplary program, or judging them according to professionally derived standards.

The ECS Task Force on Accountability (1979) was critical of the latter two as the valuational basis for state-level accountability for several reasons. First, comparison to an exemplary program may amount to comparison to a program which is merely conventional—hindering diversity and curricular creativity. Second, such a comparison fails to take into account possible critical contextual or input factors which are unique to the location, the students, or the special mission of the institution. Finally, assessing programs against professionally derived standards (as those of specialized accreditation associations) have these two weaknesses as well as the additional problems associated with
an imperfect match between professional and state interests and the values underlying each (p. 9). The Task Force, therefore, recommended that programs be judged by their success in achieving their goals with the clients they are serving.

According to Scriven, however, such an approach can quickly relativize evaluation to the point of meaninglessness. Asking "how well does the program accomplish its goals?", Scriven writes, is quite different from the basic question of evaluation which is "how good is the program?"; the first approach begs the question. Obviously, Scriven writes:

... if the goals are not worth achieving, it is uninteresting how well they are achieved. The success of this kind of relativism in the evaluation field rests entirely upon the question of whether goals are open to rational criticism (in Worthen and Sanders, 1973, p. 73).

Evaluating a program against its own objectives, therefore, is legitimate only to the extent that these are consonant with the values of the decision makers, in this case, the Board of Regents.

As noted above, however, there is not a great deal of disagreement regarding the valuational premises of statewide program review. At the most abstract level, program review rests upon the values of efficiency (the capacity of a program to operate with a minimum of effort, expense, or waste) and effectiveness (the ability to direct that efficiency toward a desired end) (WICHE, 1980). Both of these relate to the determination of worth, merit, and attraction, which Scriven differentiated at the Minnesota Evaluation Conference on May 16, 1980 (Minnesota Research and Evaluation Center). According to Scriven, worth is the pay-off of a program to the offering entity; merit is the program's comparison against standards; and attraction is the program's appeal to the market to which the program is directed. The interrelationships of these issues are obvious. A program of high merit but low attraction may be found to be of high worth to the institution with regard to its prestige, or of low worth because of its cost. Similarly, a program of low merit but high attraction may be of either high worth to
the institution as an income provider, or of low worth because of negative publicity. Thus, Scriven underscores the necessity of value clarification, the clarification of value precedence, and a clarification of the locus of decision making in the conduct of an evaluation.

The extent to which the valuational bases for the interpretation of the findings of the five-year review have been made clear should be investigated. Furthermore, the extent to which value precedence has been or may become a problem should be examined by assessing the extent of valuational dissonance which may exist between the institutions and the Regents.

Report Clarity, Dissemination, and Timeliness

According to the Joint Committee on Standards, the clarity of the written report of the findings of an evaluation is essential to its usefulness to the audiences of the evaluation (JCS, 1981). The report of findings should be written in such a way as to make understandable what was done, why it was done, what information was obtained, what conclusions were drawn, and what recommendations were made. In the context of this standard, clarity refers to explicit and unencumbered narrative, illustrations, and descriptions. Clarity is also characterized by conciseness, logical development, well-defined technical terms, tabular or graphic representation, and relevance (pp. 37-39).

Two years ago, the staff of the Board of Regents evidently felt its reporting format was deficient in this regard and radically changed its report. The previous report had essentially consisted of a bound set of the correspondence exchanged between the staff of the Regents and the participating institutions, a one-page summary of the site visit, a two-page memorandum of transmittal, and the enrollment and placement reports submitted by the institution. This format was replaced with a narrative report in five sections: a 30-page description of the background, procedures, and components of the five-year review, narrative reports on the review of each institution, and accumulative summary of recommendations for continuation, and the enrollment and employment data as
before. While the staff and administration of the Board believes the new format vastly improved the clarity of the report, the new format has itself not been evaluated.

According to the Joint Committee, evaluation findings should be disseminated to clients and other right-to-know audiences so that they can assess and use the findings (JCS, 1981. p. 40). The final report of the five-year review has typically been distributed to the Regents themselves, the first and second echelons of the Regents' administration, and the chief executive and instructional officers of the participating institutions. The adequacy of this somewhat limited distribution has never been investigated.

A seventh utility standard offered by the Joint Committee states that the release of reports should be timely so that audiences can best use the reported information (p. 44). There has been little consistency in the date of the release of the annual report of the findings of the five-year review. While the review is initiated in May of each year, the date of the final report has varied from as early as April of the following year to as late as March of the year after that. This very inconsistency and the fact that Regents' authorization to offer a program supposedly expires on June 30 of every fifth year, strongly suggest that the timing of the release of the five-year review findings should be investigated.

Evaluation Impact

The eighth utility standard specifies that evaluations should be planned and conducted in ways that encourage follow-through by members of the audience. It should have an identifiable impact upon the improvement of programs, the selection of more cost-beneficial arrangements, or upon stopping wasteful, unproductive, or terminally ineffective efforts (p. 47).

As would be expected, considerable attention has been directed toward the issue of impact in the literature related to state-level
academic program review. Most of this attention focuses upon the fiscal impact expectations of state government officials and state legislators, most of whom eagerly embrace program review asking only where they should place the coffers in which the dollar savings resulting from program eliminations will be put. Their expectations are barely disguised in the language of the Ohio General Assembly in mandating initiation of planning for institutional program review:

The Ohio Board of Regents shall report to the Speaker of the House of Representatives, the President of the Senate, and the Director of Budget and Management, by September 30, 1982, on the progress of program review efforts. In this report, they shall outline the specific accomplishments and fiscal impacts of actions resulting directly from the program review process. (Am. Sub. H.B. 167, 114th Ohio General Assembly; emphasis, the author's)

According to the literature such expectations should not be raised inasmuch as they are bound to be frustrated. Engdahl and Barak (1980) reported to the WICHE/NCHEMS Workshop on Postsecondary Education Program Review that program reviews should not be expected to result in cash savings to the state. Indeed, they reported that experience in Louisiana, New York, and Utah demonstrated clearly that they do not (p. 129). This finding confirmed Barak and Berdahl's (1978) assertion that no careful studies on the costs and benefits of program review have been made, and reporting further, stated, "Most agency staffers are very cautious about giving the impression that program review . . . can easily be translated into dollar savings; in fact, many assert that program review may not result in any savings at all" (p. 83). The expectation of significant fiscal impact is not only dangerous in terms of legislative support and the credibility of the review process, but by distorting the basic purpose of program review, it makes failure a certainty.

Speaking to this issue, Patrick Callan, the Director of the California Postsecondary Education Commission, warned the WICHE/NCHEMS Workshop (1980) that state agencies must exert strong influence to "establish the principle that the basic purpose of reviewing existing programs and terminating some of them is not to save money; rather it is to maintain and enhance quality, vitality, and responsiveness during a
time when large infusions of new resources through growth will not be forthcoming (p. 29). Evidence exists that legislators will accept the legitimacy of program review on this basis, if properly informed and not misled into believing that program review will lead them into a budgetary Shangri-La. According to William Chance, Deputy Coordinator of the Washington Council for Postsecondary Education, the case for program review was presented on just such a basis to Washington's state legislature and it was accepted (WICHE, 1980, p. 24).

Indeed, at the workshop Callan argued "if all the resources freed by effective program review are immediately captured at some higher level, we destroy all incentive for leaders in the institution to engage in what is really a high-risk, high-conflict situation" (p. 31). Ideally, institutions should be offered financial incentives to conduct program review, according to Barak and Berdahl (1978) and the Task Force on Accountability of the Education Commission of the States (1979). Realistically, however, it would probably be easier to impeach the Governor than to sell the concept of incentives to the legislature. If incentives cannot be provided, Chance argues, at least the institutions should be assured of any reallocative flexibility resulting from program review (p. 31). As Donald K. Smith (1975) writes, "A process aimed simply at program excision will never take root in the habit system of universities . . . A process aimed at maintaining the health and vitality of the institution, whether the fiscal environment is fair or foul, can take root."

The issue of impact, therefore, is a crucial one in assessing state-level academic program review. It must obviously be broader, however, than fiscal impact alone or at all, from the state department of budget and management's perspective at least. According to the "Report of Findings of the Five-Year Review" presented to the Board of Regents on June 19, 1981, the five-year review is intended to have multiple impacts, of varying degrees of objective measurement. Intended impacts include:
1) Freeing resources consumed by weak programs for reallocation to the stronger programs out of whose revenues support for the weaker ones must of necessity come.

2) Freeing resources for reallocation to the exploration of new areas of need and opportunity where the potential for success is greater.

3) Providing institutions with suggestions for the solution of programmatic problems based upon statewide experience and a state-level perspective, before problems become terminal.

4) Assisting the Regents in assessing the need for additional capital budget requests to replace or augment facilities and equipment which the institution believes to be inadequate for the proper delivery of a given program.

5) Revitalizing institutional commitments to programs which may have been suffering a not-so-benign neglect but still regarded by the institution to be important to its mission.

6) Protecting institutions against the possibility of a more obtrusive intervention by state agencies with less sensitivity to or solicitude for academic concerns and traditions such as institutional autonomy and collegial governance.

7) Reassuring the public and its representatives that the considerable resources devoted to technical education constitute money well-spent, enhancing the probability that public confidence and public support will continue (OBR, 1981, pp. 7-9).

Certainly, the standard of the Joint Committee on Standards regarding evaluation impact is applicable to the five-year review and the degree to which its intended impacts are actualized should be assured.

Practical Procedures

The Joint Committee on Standards recognizes that the design and conduct of evaluations must be circumscribed by considerations of feasibility. Three of its standards, therefore, specifically address issues of feasibility to ensure that an evaluation will be realistic, prudent, diplomatic, and frugal. The first of these standards suggest that evaluation procedures be practical, so that disruption is kept to a minimum. According to the Committee, evaluation procedures which are theoretically sound but unworkable consume considerable resources without yielding valuable and/or useable results (JCS, 1981, pp. 52f).
Practical procedure has been identified as a problem associated with state-level academic program review. The Task Force on Accountability of the Education Commission of the States (1979) cautioned the states against the development of a burdensome and excessive regulation and reporting procedure in implementing program review (p. 20). Excessive reporting requirements both severely tax the staff and fiscal resources of the institutions and quickly erode their willingness to cooperate with and support the program review process. One means of keeping the burden light, according to Kelly and Johnston (WICHE, 1980), is maximum use of on-hand data.

Currently the five-year review requires institutions to supply all its informational needs on special reporting forms. Some such information is not submitted to the Regents in any other form or for any other purpose (curriculum summaries, advisory committee membership and activity, and faculty credentials). Information, on graduate placement, degrees awarded, and enrollments, however, is regularly reported to the Regents for purposes other than the five-year review. While asking for separate reporting of this information specifically for the five-year review is of great convenience to the staff of the Board of Regents, the extent of the inconvenience to the institutions which results from doing so has never been assessed. Obviously, the standard on practical procedures is an appropriate one upon which to evaluate the five-year review.

Political Viability

Experience over the past decade suggests that evaluation may be intensely political. Recognizing this fact and addressing the issue forthrightly, the Joint Committee developed a standard to enhance the political viability of an evaluation. According to the Committee, evaluations should be planned and conducted with anticipation of the different positions of various interest groups, so their cooperation can be obtained and so that possible attempts by any of these groups to
curtail evaluation operations or to bias or misapply the results can be averted or counteracted. Any evaluation has political implications to the extent that it leads to decisions concerning the reallocation of resources. Insensitivity to these implications may result in the subversion, misapplication, manipulation, or abuse of the evaluation effort (JCS, 1981, p. 56).

The fact that state-level program review is geared toward reallocative decision making by a state agency is not the only source of potential political problems. An evaluation is inherently political, according to Kelly and Johnston (1980), to the extent that it "maximizes one set of social values at the expense of another; (it is) a political ordering of social preferences." In view of the crucial and expensive nature of higher education, the conflicts which can arise from such an ordering of values can be intense. Unfortunately, the ordering of values is not merely a prioritization; in most cases two values are at war with each other, one of which must prevail at the point of the evaluative decision. Fundamentally, accountability is a value in conflict to varying degrees with the academic values of institutional autonomy and (potentially) academic freedom. The value of access conflicts with values of program productivity and can conflict with the value of quality. The social value placed upon efficiency is often at odds with the values of free-market competition and academic diversity.

None of these conflicts, however, is more intrinsic to state-level academic program review than the fundamental tension between accountability and autonomy. It is an article of faith hallowed by centuries of academic tradition that institutions of higher education should be autonomous—free to pursue truth without outside intervention, govern itself, and manage its affairs as it sees fit. Equally compelling, however, is the social value of stewardship deeply rooted in Judeo-Christian tradition and made manifest in the democratic principle that public officials and the use of public funds for public purposes should be accountable to the public or its representatives. Striking a balance between these two values is a political art to be approached with
between these two values is a political art to be approached with sensitivity. As Kenneth P. Mortimer (1972) writes:

The real issue with respect to institutional autonomy and accountability is not whether there will be intervention by the state but whether the inevitable demands for increased accountability will be confined to the proper topic and expressed through a mechanism sensitive to both public and institutional interests (p. 23).

Despite this certainty that a way must be found to accommodate both values, state-level academic program review has been attacked as fundamentally inimical to institutional autonomy. In 1975, the State University of New York system took New York's Commissioner of Education to court, challenging the Regents' authority to terminate existing doctoral programs through its review process. Both original and appellate state courts, however, found for the Regents (Barak and Berdahl, 1978, p. 93). In Ohio, one university president has warned darkly of the consequences of the increasing encroachment of the Regents upon the academic operations of institutions of higher education. Barak and Berdahl, however, suspect that much of this public rhetoric about the threats to autonomy posed by program review constitute ad hominem remarks for internal consumption only. "A few presidents," they write, "will privately admit they are forced to oppose publicly a state review process, but in fact welcome some external leverage to help them crack open entrenched internal opposition" (p. 94). Even this, however, is a political strategy to which evaluators must be sensitive.

Aside from legitimate issues of principle, the political viability of state-level program review can be threatened by more mundane and more common political problems. The most carefully reasoned findings of an evaluation can be reversed because of a strong institutional identification on the part of a Board member or the successful exertion of political pressure upon Board members by a member of the legislature to whom an affected institution has made a special appeal. When this occurs, Barak and Berdahl (1978) write, the equity and credibility of the review process is destroyed (p. 96). The ECS Task Force on Accountability (1979), which was comprised of a number of legislators, noted
that legislators are notorious for arguing in favor of accountability plans in general and resisting their application to specific institutions in their districts (ECS, 1979a, p. 20). In doing so, of course, legislators are neither benighted nor shortsighted; such is the nature of their "political viability."

Obviously, statewide program review is both politically sensitive and vulnerable. The extent to which the Regents have been able to enhance the political viability of its program review process should be assessed.

Cost Effectiveness

Just as judgments are rendered on the cost effectiveness of academic programs during evaluations, the Joint Committee states that the evaluation process itself should be subject to the same expectation. The final feasibility standard, therefore, states that evaluations should produce information of sufficient value to justify the resources expended for its conduct (pp. 80).

There is no controversy regarding the applicability of this standard to state-level program review. It is a logical imperative.

Formal Obligation

Eight standards for evaluations of educational programs developed by the Joint Committee on Standards are intended to ensure that an evaluation will be conducted legally, ethically, and with due regard for the welfare of those involved in the evaluation and of those affected by the results (p. 62). The first of these is a standard which suggests that obligations of the formal parties to an evaluation (what is to be done, how, by whom, when) should be agreed to in writing, so that these parties are obligated formally to renegotiate it. The standard is intended to prevent misunderstandings between the evaluator and the client (p. 65).

While doing so would be important for external evaluations, its applicability to evaluations conducted by the staff of the client is
limited. The five-year review is just such an evaluation, with the obligations pertinent to the conduct of the evaluation fully understood and adequately addressed in the course of the Board's normal administrative control mechanisms. This standard is, therefore, deemed inapplicable to the evaluation of the five-year review.

Conflict of Interest

Few things can damage the perception of the propriety of an evaluation as badly as the presence of a conflict of interest on the part of the evaluator, which is present when the evaluator's private interests might be enhanced or impaired as a result of their evaluation activities (JCS, 1981). Examples of conflicts of interest cited by the Committee as potential problems include:

a) advancement of the evaluator's particular philosophical, theoretical, or political point of view by reporting particular findings;

b) the existence of a private financial interest in which the evaluator stands either to gain or lose depending upon the results of the evaluation they report;

c) the existence of an employment incentive or disincentive which depends upon the reporting of either positive or negative findings;

d) the existence of personal and/or political ties to the client which might be affected by the evaluator's report of findings which may reflect positively or negatively upon the client; and

e) the existence of the possibility that the evaluator's agency or organization may stand to gain or lose as a result of the evaluation findings (p. 70).

Frequently, according to the Committee, conflicts of interest are unavoidable. This would be particularly true among educators/evaluators, who would probably be unworthy of their profession if they did not have a strong philosophical or theoretical point of view to bring to bear upon their task. The problem, therefore, is less one of dealing with any which may be perceived as being present to prevent them from biasing the evaluation.
The literature on state-level program review is silent about conflict of interest. Nonetheless, the issue is applicable, particularly with regard to several of the above potential conflicts of interest. It is easy to imagine a state-level program evaluation which is biased by a particular philosophical, theoretical, or political point of view which is neither explicitly shared, nor even appropriate to the task. Particularly when the state-level evaluator is an employee of the state agency, an employment conflict of interest is possible if that individual's employment goal is to work in one of the institutions being evaluated, or he has come from one of those institutions. A political conflict of interest is possible when or if the evaluator is too closely identified with one sector or group of institutions which are in conflict with another. There are, therefore, a number of potential conflicts of interest which could corrupt state-level program review. The five-year review should be assessed on the extent to which conflicts of interest in its process has been avoided or dealt with.

Full and Frank Disclosure

The third standard for propriety developed by the Joint Committee pertains to full and frank disclosure of the results of the evaluation. Specifically, the standard states, "oral and written evaluation reports should be open, direct, and honest in their disclosure of pertinent findings, including the limitations of the evaluation" (p. 74). According to the committee, the absence of full and frank disclosure severely threatens the credibility of the evaluation, particularly when reports are altered to reflect the self-interest of the evaluator, the client, or the program staff.

State-level program review can be impaired by the issuance of a report which conceals information pertinent to the recommendations or introduces in the final report issues which were not addressed during the review and are consequently irrefutable. Such a lack of candor can destroy the review process. This standard is clearly applicable to the five-year review.
The Public's Right to Know

The fourth propriety standard is written to ensure that the formal parties to an evaluation respect and assure the public's right to know, within the limits of other related principles and statutes, such as those dealing with public safety and the right to privacy. A right-to-know audience is defined as one which is entitled ethically and legally to be informed about the intents, operations, and outcomes of an evaluation. Failure fully to inform those who are affected by the results of an evaluation deprives them of the right to detect any flaws in its procedures or data, and reduces the usefulness of the findings to these individuals. As a consequence, they may become unwitting victims of unwarranted conclusions or actions. In promulgating this standard, the Joint Committee asserted that "evaluations should be expected to withstand the critical examination of those whose lives they may affect and to provide them with useful information" (p. 77).

The alternative for state-level program review would be disastrous to the process itself and dangerous for the participating institutions. Conducting an evaluation "under the covers," and presenting recommendations to the state board which have not been disclosed in advance to the institution concerned, would intensify an atmosphere of threat and open the review process to possibilities of political or philosophical abuse. The existence of "sunshine laws" themselves is not adequate to assuring compliance with this standard inasmuch as only the formal actions of the agency are covered by such laws. The adoption of faulty, biased, or destructive recommendations in a public forum, in the "sunshine," does not afford the institutions with protection against the abuse this standard is designed to ensure. The extent to which this public's right to know is assured in the processes of the five-year review should be assessed.

Rights of Human Subjects

According to the Joint Committee, evaluations should be designed and conducted so that the rights and welfare of human subjects are respected
and protected. Such rights include both legal and ethical rights as privacy of certain information, confidentiality of some information, and the avoidance of physically harmful or uncomfortable experiences (p. 81).

A strict interpretation of the meaning of the term "human subjects" would result in a conclusion that this standard is not applicable to an evaluation of the five-year review. There are no "human subjects" in the five-year review whose rights are legally protected (consent for participation, privilege or withdrawal, rights to privacy, or protection against harmful or physically uncomfortable experiences). The quantitative information requested for the five-year review is entirely within the public domain and within the rights of the Regents to request.

The five-year review does, however, collect qualitative information during site visits based upon discussions and interviews with chief executive officers, chief instructional officers, and sometimes, faculty. Sometimes the information provided by these individuals is of a confidential nature, divulgence of the source of which could be embarrassing or destructive to the interests of the provider. The five-year review should, therefore, be assessed on the extent to which the confidentiality of information provided is protected.

Human Interactions

Closely related to the rights of human subjects during an evaluation is the sixth propriety standard of the Joint Committee. To protect against potentially harmful effects upon participants resulting from evaluator human interactions, the Joint Committee states that evaluators should respect human dignity and worth in their interactions with other persons associated with an evaluation. In its commentary on this standard, the Committee writes:

Evaluators who do not understand and respect the feelings of participants in an evaluation may needlessly sadden or harm these persons, or provoke in them hostility towards the evaluation. Such offense to people violates the moral imperative that human beings'
essential dignity must be respected, and it inhibits creativity. In addition, it is impractical, because participants who have been offended may be moved to do things that seriously jeopardize the evaluation (p. 88).

Clearly, any state-level program review conducted with "insolence of office," without due respect for or with callous disregard of the human and professional dignity and worth of the institutional personnel participating in the review, would have a devastating effect upon the review process. Evaluation anxiety can never be fully eradicated from the process, but to exacerbate such anxiety with arrogance or insensitivity to the feelings of participants not only reflects dishonor upon the state agency sponsoring the review but poisons relationships between the state agency and the institutions, which must cooperate on a range of other matters. The carefulness of the personnel conducting the five-year review in respecting the human dignity and worth of the participants of the review should be assessed.

Balanced Reporting

The seventh propriety standard promulgated by the Joint Committee suggests that evaluation reports should be complete and fair in the presentation of the strengths and weaknesses of the programs under investigation, so that strengths can be built upon and problem areas addressed. According to the Committee, even if the primary purpose of an evaluation is to determine the weaknesses of a program, it is essential to identify strengths as well, inasmuch as strengths can sometimes be used to correct weaknesses, and sometimes, actions taken to correct weaknesses may inadvertently diminish some unidentified strengths (p. 90).

Balance in reporting the results of state-level evaluation of programs can be a problem. Aside from the reasons cited by the Committee, a review process which concentrates only upon program weaknesses would have three negative impacts. First, doing so would result in a negative process which would cast the state agency in the
role of a carping bureaucratic busybody with nothing good to say to those
who work hard to fulfill their professional commitments. Second,
reports which concentrate on weaknesses alone introduce into the public
forum only negative information, thereby distorting perceptions of Board
members of the realities of institutional performance. Third, reports
which focus only on those programs having weaknesses lead institutions
and faculty to the conclusion that their successful efforts are
unappreciated at worst, or that their participation in the review has
been a massive waste of their time, at least.

At the other extreme is the temptation to write reports, usually
directed at wider audiences than the Board alone, which concentrate on or
report only the strengths of the programs and institutions reviewed.
Such reports destroy any usefulness for the review and usually have the
opposite effect on the targeted audiences (public-at-large or the
legislature). As the Task Force on Accountability of the Education
Commission of the States (1979a) noted, program review must be balanced
as well as impartial. A review which constitutes an uncritical advocacy
of current practices or a plea for more resources will destroy its
credibility with both the public and legislators. "Advocacy," the Task
Force writes, "must be kept separate from the accountability process."
(p. 29).

The five-year review both can and should be assessed on the extent
to which its results are balanced.

Fiscal Responsibility

The fiscal propriety standard of the Joint Committee relates to
fiscal responsibility. The standard indicates that the evaluator's
allocation and expenditure of resources should reflect sound accountabil­
ity procedures and otherwise be prudent and ethically responsible
(p. 93). While the principle underlying this standard is certainly
applicable in a general sense to all evaluations, this standard is not
deemed applicable to the five-year review inasmuch as fiscal accountabil­
ity for the five-year review is assured through the normal fiscal
operations of the Board of Regents, subject to audit by the Auditor of State.

Object Identification

The fourth general category of standards of the Joint Committee are designed to ensure the technical adequacy, or accuracy, of the information concerning the subject of the evaluation. There are 11 such standards, the first of which states that the object of the evaluation should be sufficiently examined so that the form of the object being considered in the evaluation can be clearly identified. Not only does the Committee believe the program must be adequately defined, but also that it must be studied over time to avoid false impressions that the object is stable and does not change (p. 99).

In state-level program review, this standard speaks to two important issues—definition of the programs to be examined and the means of selecting the program for review. While the object of program review is generally understood to be an institution's instructional programs, the concept of program review need not necessarily be limited to instructional programs unless the state agency clearly delimits its review to these programs. As Millett (1979) argues, there are other programs of a non-instructional nature in which the state may have a fiscal interest. Such programs would include programs under student services, student financial aids, student athletic programs, academic support programs, auxiliary enterprises, or other programs of a non-instructional nature funded through special line-item appropriations. Such programs may from time to time capture the state's interest and be subject to program review. For the most part, however, program review focuses upon instructional program review in recognition of the facts that instructional programs comprise the core activity and raison d'être of a college or university and that at least three-quarters of the state's annual financial commitment is directed toward the subsidization of instruction and instructional support.
Once the agency has made it clear that instructional programs are the focus of its program review, further specificity is needed in defining programs. There are two dimensions to such a definition. The first of these is defining when an instructional effort is of sufficient identity or intensity to justify being called a program. A number of terms are used by colleges and universities to differentiate instructional efforts by the degree of their identity and/or intensity. Such terms include "degree program," "major," "minor," "emphasis," "option," and "track." Unfortunately, there is little consistency in usage of these terms among institutions, and the state agency itself must adopt operational definitions of the various terms in deciding when a program is of sufficient interest to the state to justify a review. Some states review only degree programs and ignore programs classified by the institutions at the lesser levels of "majors" or "concentrations." Barak and Berdahl (1978), however, caution the states against doing so for several reasons. Information on majors or concentrations is important because it helps identify possible area of program expansion, relate more accurately actual program cost centers to institutional costs and resources, and overcome the inequity which may result from one institution offering a program as a degree program, (thereby making it subject to review), while another calls it a "track" or "major," thereby escaping review. The issue also has quality and consumer protection implications. Barak and Berdahl cite an example which occurred in one state where a few institutions were passing off to unsuspecting students low intensity programs as degree programs. Students not only encountered limited course offerings but also low marketability of their degrees (pp. 66f).

Having operationally defined the level of programming of interest, states have also found it necessary to adopt a taxonomy of program titles which assign a common title to all programs in the state having common objectives and similar content. Faculty members can be most creative in developing titles for programs which distinguish their program from
other programs available without any real differences in content of objectives: a secretarial program is re-baptized as "administrative support technology," a heating and air conditioning technical program becomes "climate control technology." Whatever the institution chooses to call its program in its catalogue, the state agency should be able to identify it according to a standard taxonomy of titles which identifies it as sharing the essential characteristics of similar or identical programs in the state. A common taxonomy not only defines the programs under review, but also serves as a check to deceptive advertising. Such a taxonomy is essential if the state intends to investigate programs on the criterion of duplication or if it intends to conduct lateral reviews. Barak and Berdahl identify several such taxonomies which have been developed nationally (HEGIS, NCES, NCHEMS) which a state may adopt with modifications appropriate to the specific state, or a state may choose to develop a taxonomy on its own (pp. 67f). In either case, a taxonomy is helpful, if not essential, in meeting the object identification standard.

Under the category of object identification fits the need for the states to decide on the method by which they will select programs for review. Obviously, no state agency has the staff, resources, or inclination to review all programs each year. It must, therefore, adopt one of a number of mechanisms for the selection of programs for review. Engdahl and Barak (WICHE, 1980) identify nine such mechanisms which can be placed into two categories. The first of these is the scheduled review, by which states either establish their own review cycle or adopt the review schedule of a regional accreditation association and review all programs offered by the institution scheduled for review in a given year. This approach has the advantages of simplicity, equity, feasibility, predictability, and balance (in that all programs, both good and bad, are reviewed). It has the disadvantage of what some may view as wasting time on the review of good programs, and it makes lateral review more difficult, if not impossible. An additional disadvantage is
inflexibility—once the schedule is set, the agency may be committed to it for up to seven years. Despite these disadvantages, the five-year review is such a scheduled review.

The alternative means of selecting programs for review is more common and can be categorized a triggered review, or review by exception. One such mechanism for selecting programs for review involves the use of a screening process by which all programs are reviewed on a single criterion, e.g., duplication, or high cost, or low productivity, and then only those programs demonstrating evidence of concern on that single criterion are reviewed more extensively. Barak and Berdahl (1978) report that such a mechanism is employed by the State of Washington. Other triggering mechanisms include general funding limitations, questions raised external to the institution (such as a negative accreditation report) or programs identified by the institution as being troubled and in need of special consideration, as Rovetch (1979) recommends. While triggered reviews resolve many of the above disadvantages of scheduled review, it loses the advantages of balance (in that only "troubled" programs are investigated), predictability (institutions would not know from year to year which, if any, of its programs would be reviewed), and feasibility (conceivably, each institution in the system would have at least one of its programs under review by state-level staff each year, and state-level review would, therefore, be continuous).

There is much, therefore, to be considered under the accuracy standard of object identification in the design, implementation, and assessment of state-level academic program review. The five-year review can and should be assessed with regard to this standard.

Context Analysis

According to the Joint Committee, the social, political, geographical and economic context within which a program exists should be examined in enough detail so that its likely influence on the program
being evaluated can be identified. Such contextual information is essential to the presentation of an accurate view of the program being evaluated, and is necessary to help audiences interpret the findings of the evaluation accurately (p. 104).

This standard has obvious implications for the conduct of state-level program review. Barak and Berdahl (1978) warn the states against the inflexible application of statewide criteria and standards and state interest without knowledge of, respect for, and sensitivity to local conditions, aspirations, and potentials. Social mores regarding college attendance differ within regions of the state. Patterns of college attendance among rural, Appalachian families are distinctively different from those common to major metropolitan centers. Job placement may merely be slower, not lower, in economically depressed areas whose residents are hesitant to migrate to where the jobs are. Temporary economic dislocations in an urban center may artificially depress a given job market despite continued need for specific technicians in that area. Negative attitudes toward technical education in some areas may be difficult to overcome among significant numbers of persons accustomed to thinking of colleges as ivy-covered bastions of culture.

Institutional contextual factors may also have an impact upon the accuracy of any conclusions about program need or performance. The maturity of the institution itself, the type of institution it is, the degree to which various components or its mission are integrated, the stability of its leadership, the quality of its internal governance and the general quality of academic life within the institution, may have significant impact upon the performance of a given program or all programs within that institution. Imperfect knowledge of such contextual factors may lead to premature and inaccurate conclusions about the need for a program and/or its viability either at that institution or elsewhere in the state at an institution with a more or less hospitable context.
The extent to which the five-year review is capable of such a context analysis, and the extent to which it has taken such factors into account, should be assessed.

Described Purposes and Procedures

Few things can debilitate an evaluation as thoroughly as inadequately described purposes and procedures. The Joint Committee, therefore, states that these should be monitored and described in sufficient detail so that they can be identified and discussed (p. 107).

There can be little doubt as to the applicability of this standard to statewide program review. A visitation from a representative of the state funding authority for the purpose of evaluating programs can be threatening enough; this atmosphere of threat can only be compounded by leaving the purposes of the evaluation amorphously defined. This is particularly true when the state agency has legal authority to impose sanctions upon an institution or when it is a governing, rather than coordinating, board. If it is indeed the latter type of board, the purposes of its review must be carefully described so that the individuals conducting the review do not unwittingly or intentionally expand the scope of the review beyond the legal authority of the state agency.

Carefully described procedures are necessary from both institutional and state agency perspectives. First, institutions need to understand what it is they must do in participating in the review which enable them better to cooperate with the review. Second, it enables the state agency to assess the adequacy of its procedures in yielding accurate findings. Third, it enables both to subject the evaluation to rational analysis.

The point need not be belabored. The five-year review should be assessed on the extent to which its purposes are clear and its procedures are described.
Defensible Information Sources

The fourth standard designed to ensure the accuracy of an evaluation states that the sources of information should be described in sufficient detail so that the adequacy of the information can be assessed. Sources of information should be both described and defensible, the process by which the information is collected from each source should be documented and copies of instruments used retained for inclusion in a technical appendix to the report, sampling procedures should be described and attrition from samples should be documented.

Finally, reminiscent of the utility standard regarding information selection, the Committee again recommends the use of previously collected or existing data to the extent possible (p. 112).

While some sampling procedures are used during the five-year review, the other major components of this standard are applicable to an evaluation of the five-year review. Its information sources should be described, defensible, and documented. Otherwise, the accuracy of the information upon which its recommendations are based cannot be appraised by either the Board of Regents, or the institutions participating in the review.

Valid Measurement

Equally clear-cut and compelling is the requirement that the information gathering instruments and procedures be chosen, developed, and implemented in ways that will ensure that the interpretation arrived at is valid for the intended use. According to the Committee, measurement validity concerns the soundness of the inferences that are made from the results of the data gathering process. The measures used must be validated with reference to the specific question asked, and ideally, multiple measure of outcome should be employed. Whenever practicable, therefore, the Committee recommends that "evaluators should use several methods of assessment in combination to get a better reading on a single variable" (pp. 116-117).
There can be no controversy regarding the applicability of this standard for accuracy in the conduct of state-level academic program review. Indeed, one of the most persistent complaints about specialized accreditation association evaluations concerns questionable validity of its measures of program quality. Evaluation must be expected to have answers to questions of the extent to which inferences about quality can be drawn from a count of library volumes, a count of clerical staff assigned to a program, or a given faculty to student ratio.

Similarly, one of the major obstacles to state-level program review cited by the ECS Task Force on accountability (1979a) has been the difficulty states have encountered in obtaining agreement upon appropriate measures of program performance. Critics opposed to state-level program review are fond of raising the charge that state-level program review, because of its heavy reliance upon objective data, emphasized quantity at the expense of quality. According to William Chance, Deputy Coordinator of the Washington Council for Postsecondary Education, such an argument is a red herring which should not be taken seriously (WICHE, 1980). Quantitative measures are not at war with quality, and a substantial part of the quality of a program can indeed be measured objectively, so long as those measures have been validated.

Measurement validity is not, however, as easy as it sounds. There is no element in education which is as useful as mercury is in health in assessing the patient's wellness. Various means of placing the palm on the forehead have been developed with varying degrees of validity, depending entirely upon the characteristics of the patient under investigation. As one measure of quality, the state of Maryland developed a questionnaire which asked students and employers to assess the quality of occupational programs by asking both to report their level of satisfaction with the program or its product. Since 1976, the American College Testing Program has been developing a "College Outcome Measures Project" battery of tests to assess the general knowledge, skills and attitudes undergraduates "will need to function effectively
as adults" without regard to the specific educational objectives of the program from which the student is to graduate (Rovetch, 1979). Rovetch describes other outcome measures of varying degrees of complexity, intrusiveness, usefulness, and applicability to state-level program review (p. 68).

Fundamentally, however, the validation of standards used in program review will be problematic. As Kelly and Johnston (WICHE, 1980) point out, norm-referenced measures cannot be used in the conduct of state-level review. If the state abolishes all programs to the right of the normal distribution that contains low quality programs, the distribution will assume the same shape over repeated administrations. Consequently, programs of acceptable quality this year become the worst programs in the state next year without having changed one iota.

States, therefore, usually opt for criterion referenced measures. The problem, however, with the installation of a prestated, external standard of performance on a quality criterion, for example, is that it is extremely difficult to locate that standard for performance on empirical grounds, and if possible at all to do so, it is extremely expensive. Most such standards, therefore, are derived judgmentally, not empirically, and as such, are preeminently "social artifacts" (pp. 74f).

Thus, it may be necessary to temper the application of this standard to state-level program review by requiring that measures used either be scientifically validated or validated by a fair consensus of professional opinion. In either case, the measure would be sufficiently validated from the perspective of the state's objectives in conducting the review, particularly if multiple measures are used.

As discussed above, the five-year review results in recommendations for program continuation based upon inferences drawn from particular data regarding effectiveness, need, and productivity. The extent to which its measures validly support such conclusions and/or inferences should be investigated.
Reliable Measurement

The sixth accuracy standard is designed to ensure that information gathering instruments and procedures are chosen, developed, and implemented in such ways as will assure that the information obtained is reliable for the intended use. A reliable measure is one that provides consistent indications of a characteristic (p. 120).

Reliable measurement in the five-year review must be construed, by the nature of the type of information requested, to refer to the extent to which institutions provide information on the same basis and interpretation of the request. Inadequate definition of how to report enrollments and how to classify graduates according to their employment could damage the reliability of the instrument and yield incomparable results. Thus, redefined, the standard is applicable to an evaluation of the five-year review.

Systematic Data Control

According to the Committee, the data collected, processed, and reported in an evaluation should be reviewed and corrected so that the results of the evaluation are not flawed. In short, all the data used should be as error free as possible (p. 124).

Errors in data reporting can result in errors of interpretation and flawed recommendations resulting from a program review. The existence of errors in the data, unchecked and uncorrected, can also discredit the entire review. The extent to which control for such errors exists in the five-year review is an appropriate area for investigation in the evaluation of the review.

Analysis of Quantitative and Qualitative Information

A fundamental standard for accuracy, the applicability of which stands equally on its own merit, is the requirement that both qualitative and quantitative information in an evaluation be appropriately and systematically analyzed to ensure supportable conclusions. The quantitative information for an evaluation consists of those facts and
claims which are represented by numbers. Quantitative analysis is the
process of compiling, organizing, manipulating, and validating such
information so that questions about the program can be answered
accurately (p. 127). Qualitative information is equally useful in
forming conclusions about a given program, and includes facts, state­
ments, and interpretations which are in narrative rather than numerical
form. The result of qualitative analysis is a narrative presentation in
which numerical values are usually not assigned any of the information
(p. 130). The five-year review relies heavily upon both types of
information in its various phases, which will fully be described in a
later section. For present purposes, however, the preliminary stage
collects and analyzes quantitative information for the purpose of a
preliminary letter of questions, comments, and concerns. The second
phase consists of both qualitative and quantitative information pre­
sentated by the institution under review in a letter of response. The
final stage consists primarily of the collection of qualitative informa­
tion during a site visit to the campus, during which time discussions
and negotiations are held regarding the programs about which unresolved
concerns had been raised in the first phase.

It is appropriate, therefore, to assess the five-year review with
regard to its analysis of both types of information.

Justified Conclusions

While it may seem self-evident, the Committee included among its
standards a requirement that the conclusions reached in an evaluation be
explicitly justified so that the audiences can identify them. According
to the Committee, the conclusions of an evaluation must be both
defensible—based upon sound logic and appropriate information—and
defended—reported along with an account of the evaluations procedures,
information, and underlying assumptions (p. 135).
Failure to make the rationale underlying recommendations resulting from program review explicit asks the state board to take recommendations of faith. A good board would reject such recommendations, and the review process which produced them. A board more willing to take the leap of faith might adopt inappropriate, or injurious, recommendations, bringing disrepute upon itself as well as discrediting its review process. In fairness to both the Board of Regents and the review process itself, therefore, the extent to which the recommendations resulting from the five-year review are explicitly defended and defensible should be assessed.

**Objective Reporting**

The final standard promulgated by the Joint Committee for ensuring accuracy is closely related to the feasibility standard of political viability and the propriety standards of full and frank disclosure and balanced reporting. Once more the Committee makes it clear that objectivity must be the hallmark of evaluation, not only because it is essential to propriety and feasibility, but because it is essential to accuracy. The Committee, therefore, prescribes that evaluation procedures should provide safeguards to protect the evaluation findings and reports against distortion by the personal feeling and biases of any party to the evaluation.

Lack of objectivity in the report of an evaluation can result from errors of both omission and commission. In the former category would fit the failure of the evaluator to represent the many perspectives that should be taken into account. In the latter category, reports can be written in such a way as to deceive the client, whitewash a real problem which is inconvenient, or to confirm or justify decisions made on other grounds (p. 138).

Abuses which can result from the deliberate or unwitting distortion of evaluation fundings of state-level program review have already been enumerated. A review process without objectivity is worse than a mere
waste of time; it can be dangerous and destructive of the health of higher education in the state. Clearly, the five-year review should be assessed for its objectivity in reporting.

SUMMARY

All the issues raised in the literature pertaining to state-level academic program review are addressed in the Standards for Evaluations of Educational Programs, Projects, and Materials (1981). These standards, with appropriate emphasis drawn from this literature, constitute a useful conceptual framework for the conduct of the meta-evaluation of the five-year review of technical education programs of the Ohio Board of Regents.
CHAPTER III
STUDY DESIGN AND PROCEDURES

The design, instrumentation, and analysis to be used will be referenced to the literature pertaining to meta-evaluative studies, drawn primarily from the work of Daniel L. Stufflebeam. Evaluation research differs from traditional social science research, and while the two are not mutually exclusive or inimical, it is important to recognize the differences between the two so that these differences can be taken into account in the design of the study (Worthen and Sanders, 1973).

Briefly, evaluation differs from traditional social science research with regard to 11 shared characteristics. The first of these is the motivation of the inquirer. While the satisfaction of the curiosity of the inquirer is usually regarded sufficient motivation for the conduct of the traditional research study, the primary intent of an evaluative study must be to solve a policy problem. The objective of research, therefore, is to arrive at truth in the form of supportable conclusions for its own sake; the conclusions of an evaluative study must be geared toward a decision which must be made. The ends of research are laws and theory, and as such, research is nomothetic; evaluation seeks fully to describe salient characteristics of particular objects, and is, therefore, idiographic. In evaluation, therefore, answering the question of why a particular phenomenon occurs is less important than fully describing how it operates. External validity is an essential characteristic of our research; it is neither expected nor possible to generalize the conclusions of an evaluative study.

In their efforts to arrive at empirically verifiable truth, researchers must exert strong self-discipline to prevent the intrusion of value questions which may bias their findings. Value questions of worth are sine qua non in evaluations. Ideally, researchers enjoy a scientific
independence and autonomy of inquiry which is alien to the evaluator's task, and can expect their product to be judged solely upon their demonstration of internal and external validity. The two criteria used in judging the product of an evaluative study are isomorphism, or the extent to which the information obtained is consistent with the information desired, and credibility, the extent to which the client needing the information believes the findings (which may or may not be within the evaluator's control).

The final difference identified by Worthen and Sanders is the sufficiency of a single disciplinary base for the conduct of research as contrasted with the need of evaluators to employ more methods of inquiry, analysis, and perspectives than a single discipline usually provides. Evaluators need multiple techniques and measures sufficiently rigorous to answer the question of worth, but less rigorous than those necessary to answer questions of truth. In this regard, the evidentiary rules of evaluation are the same as those which apply to civil law as contrasted with those applied in criminal law. An evaluation's findings and recommendations are accepted on the basis of a preponderance of evidence. Research findings must be proved beyond a reasonable doubt.

These differences notwithstanding, the techniques and methods of inquiry used in both types of studies are more alike than different at the descriptive level. They have less and less in common as research moves toward explanatory or experimental levels.

With these differences and similarities in mind, the design of this study will be based upon Stufflebeam's model for the design of evaluations, excerpted in Worthen and Sanders (1973, pp. 143-148).

Focus

The first part of the Stufflebeam model is the focus of the evaluation, and the first step necessary in arriving at this focus is to identify the level of decision making to be served and project the decision situations to be served. The decision situation must then be
described in terms of locus, focus, criticality, timing, and the composition of alternatives.

The level of decision making to which this study is geared is the state-level. The object is the five-year review of technical associate degree programs conducted by the staff of the Ohio Board of Regents in which all state-assisted colleges and universities offering technical associate degree programs must participate as a clear condition of program approval in the first instance.

According to the Stufflebeam model, different types of evaluations serve four different decisional situations. These situations differ according to whether the object in question deals with ends or means, and whether the decision makers are dealing with an intended or an actual object. Figure 1 displays these different decisional situations, and the type of evaluation appropriate to each. While the five-year review itself is a product evaluation, this study is a process evaluation which is intended to serve the implementing decision situation by providing the Ohio Board of Regents with information it will need to refine the current procedures of the review, if indeed, refinement is justified. It will also yield information upon which the Board may base planning and structuring decisions in its consideration of expanding program review to other academic levels of higher education in Ohio.

The second major step is the development of criteria and standards for judging the review. The foregoing review of the literature suggests that the criteria for judging the five-year review should be utility, feasibility, propriety of conduct, and accuracy. The standards are those developed by the Joint Committee on Standards for Evaluation (JCS, 1981).

The third step in the Stufflebeam design model intended to focus the evaluation is the specification of the policies within which the evaluator must operate. Inasmuch as the researcher has been a member of the administrative staff of the Ohio Board of Regents for the past four years and is in possession of all pertinent rules, statutes, and policy
manuals of the Regents, knowledge of and adherence to all such policies may be safely assumed.

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<th>INTENTS</th>
<th>ACTUALITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ends</td>
<td></td>
</tr>
<tr>
<td>Planning Decisions to determine objectives</td>
<td>Recycling Decisions to judge and react to attainments</td>
</tr>
<tr>
<td>Context Evaluation (or Needs Assessment)</td>
<td>Product Evaluation (Summative Evaluation)</td>
</tr>
<tr>
<td>Means</td>
<td></td>
</tr>
<tr>
<td>Structuring Decisions to design procedures</td>
<td>Implementing Decisions to control and refine procedures</td>
</tr>
<tr>
<td>Input Evaluation (Means Assessment)</td>
<td>Process Evaluation (Formative Evaluation)</td>
</tr>
</tbody>
</table>

Figure 1: Types of Decisions Served by Evaluations and Types of Evaluations Appropriate to Each

Data Collection

The second component of the Stufflebeam model for the design of evaluations pertains to information collection. Within this component, evaluators must specify the source of the information to be collected, the instruments and methods to be used in collecting the information, sampling procedures to be used, and the conditions and schedule for the collection of information.

The two audiences of the five-year review are the Board of Regents itself and the institutions which participate in the review. Representatives of both audiences were asked to make judgments concerning the utility, feasibility, propriety of conduct, and accuracy of the five-year review.

Two methods and two different instruments were used to gather these judgments. Which method and instrument used depended upon the researcher's perception of the degree of detail with which various participant groups have been involved in the actual operation of the review. Those with the greatest detailed knowledge of the review, the chief instructional officers of the participating institutions, were asked to complete an evaluative questionnaire in a modified Delphi Technique. The instrument used is appended to this study (Appendix A). According to Delbecq, Van de Ven, and Gustafson (1975), the Delphi technique is particularly appropriate to the kind of judgmental decision making to which this study is directed. Characteristics of Delphi which should be considered particularly facilitative of the decision making goal of this study include forcing respondents to think through the complexity of the problem and to engage in proactive search behavior in isolation from other study participants. In a Delphi, the anonymity and isolation of the respondents provide them with freedom from conformity pressures and promotes equality of participation. Delphi also promotes a perceived sense of closure and accomplishment and is especially valuable for obtaining judgments from experts who are geographically dispersed, which is the case among chief instructional officers of the 52
institutions in Ohio which participate in the five-year review. There are three conditions necessary to a successful Delphi study. There must be adequate time for the process, participants must have skill in written communication, and participant motivation must be high (p. 84). Fortunately, all three conditions existed.

In view of the adoption by this study of the Standards . . . (1981) as the conceptual framework for assessing the review, the first wave questionnaire which usually characterized Delphi studies was eliminated. No need was seen for a preliminary questionnaire asking respondents to identify the criteria upon which the review should be assessed. These respondents were, therefore, sent the more detailed questionnaire which usually characterizes the second wave of a Delphi. A third wave was planned to explore comments requiring clarification and to approach resolution of significant dissensus, but this procedure proved unnecessary.

Administrative officers of the Regents and institutional chief executive officers were perceived as having less detailed knowledge of the operation of the review. It was assumed, therefore, that prior to being able to render the judgments sought, these participants would have to receive explanatory or descriptive background information. They were, therefore, interviewed, but were asked the same questions as appear on the Delphi instrument. This procedure permitted more interaction between the researcher and the participant, and elicited more commentary in participants' responses, but retained comparability in the responses of the different participant groups. The interview schedule used is appended as Appendix B.

The third means of collecting information for this study was a content analysis of the documentary information pertaining to the five-year review held in the files of the Ohio Board of Regents. This information included the final reports of findings of the various review, Board meeting minutes, and correspondence.

The fourth step in the information collection phase of an evaluation design is the specification of a selection of sampling procedure. Six
Regents' staff members were selected to participate in this study and they were selected on the criterion of salience of the five-year review to their work with the Board or to their interests. The six included the Vice Chancellor for Two-Year Campuses, the Vice Chancellor for Health Affairs, the Assistant to the Chancellor, the Executive Director for Budget and Resource Planning, the Administrator of Management Information, and the Deputy Chancellor. Ten chief executive officers were randomly selected from among the institutions which have participated in the last three five-year reviews. The decision to limit eligibility in this manner was made for several reasons. First, seven years ago all institutions offering technical programs were assigned to five groups which would result in a mix of institutions which would yield approximately the same number of programs to be reviewed each year of the five-year cycle. The result has been a mix of institutional types (technical colleges, community colleges, and university affiliated two-year campuses) and institutional sizes which from year to year approximates the mix of institutions as a whole. Useful and natural groups were, therefore, found already to exist. The last three cohorts were used because, while participants could have reasonably be expected to recall the operation and impact of a review which occurred up to three years ago, it was thought doubtful that more than a three-year recall would yield information which was accurate or reflective of current practice.

It was necessary, however, to use a sampling procedure in selecting participants from the 50 captured by the above decisions to assure that the study participants were as a group representative of the institutional composition of the system as a whole. It was thought possible that appraisals of the five-year review could vary according to institutional affiliation of the participants. Provisions had to be made to assure proportional representation in the study group of the three institutional types. To have made the representation proportional on the basis of the numbers of each type of institution, however, would not have, in fact, accurately represented the system as far as the five-year review is concerned. University affiliated two-year campuses
account for nearly 54 percent of all two-year campuses, but they account for only 24 percent of the enrollments in Ohio's two-year campus system. Inasmuch as the study at hand relates to technical program review, it was, therefore, decided to base proportional representation upon institutional shares of the total number of technical programs offered, and hence, reviewed. Enrollments in those programs was viewed as irrelevant; all are reviewed irrespective of size. Over the past five years, a total of 789 programs have been reviewed; 31 percent of them have been offered by university affiliated two-year campuses, 24 percent by community colleges, and 45 percent by technical colleges.

To achieve this relative distribution of chief instructional officers according to institutional affiliation, however, it was necessary further to limit the total number of study participants to no more than 22 of the 30 eligible, because there were only ten eligible technical colleges, and five eligible community colleges. To achieve proportional representation, therefore, eight of the 15 university affiliated eligibles had to be eliminated from eligibility. The seven comprising the final study group were chosen at random by a drawing of names by a neutral third party. The same drawing procedure was used to select the four technical college, three community college, and three university affiliated chief executive officers who were interviewed.

The jury which resulted consisted of ten chief executive officers, 22 chief instructional officers, and six Regents' staff members. One technical college chief instructional officer left his position shortly after selection was complete and could not, for reasons cited above, be replaced. The final selected jury, therefore, consisted of 37 participants. All those selected for interview agreed to be and were in fact interviewed. There was 100 percent return of the Delphi instrument.

The final step in the information collection phase of the Stufflebeam model is the specification of the schedule for information collection. Participants were selected and contacted during August, 1981, during which time the two instruments were developed, pre-tested
and refined. Questionnaires were mailed on September 3, 1981; all had been returned by mid October. Interviews were held during October and November, 1981.

Organization of Information and Analysis

The third and fourth components of Stufflebeam's design model refer to the organization and analysis of the information collected for the evaluation. In this phase of the design, the evaluator is expected to provide a format for the information collected, designate a means for performing the analysis, select the analytical procedures to be used, and designate the means for performing the analysis.

The standards themselves provided a framework for organizing the information collected. A worksheet was developed for each standard on which the five-year review was assessed. The worksheet was used to record numerically the responses from the three participant audiences which yielded a mean score for each item by each participant group. Any verbal or written comments respondents may have provided were also recorded on this worksheet. Participant responses were used to generate a summary score for the review on each of the 28 relevant standards, and the questionnaire items were phrased in such a way as to make strong agreement or agreement indicative of a positive rating for the review on the referenced standard. As the appendixes indicate, questions were phrased in such a way as to force choice among four possible responses. Thus a four-point scale was used in deriving the rating scores with values assigned to the responses as follows: strongly agree (4), agree (3), disagree (2), and strongly disagree (1). Such ratings were calculated for each participant group and for the study group as a whole. Aggregate ratings falling between 3.51 and 4.00 were interpreted as indicative of strong agreement that the review met the standard; ratings between 3.26 and 3.51 were indicative of fairly strong agreement; rating between 2.76 and 3.25 were interpreted as indicative of solid agreement; ratings between 2.51 and 2.75, weak agreement. Similarly, ratings
between 2.26 and 2.50 were interpreted as weak disagreement; ratings between 1.76 and 2.25 were taken to indicate solid disagreement; and ratings falling between 1.51-1.75 and 1.00-1.50 were interpreted as indicative of fairly strong disagreement and strong disagreement, respectively.

Reporting

The fifth phase of an evaluation design is the specification of a means of reporting. Stufflebeam suggests that evaluators define audiences for the evaluation report, specify the means for providing information to the audiences, specify the format for the reports, and then schedule the various reports.

There are four audiences for this meta-evaluation. These audiences are the Ohio Board of Regents, the administration of the Board, and the chief instructional and chief executive officers of the colleges and universities which participate in the five-year review. At the discretion of the Chancellor of the Board of Regents, the Board can be provided an oral and written report of the findings of this study at one of its monthly meetings. This written report will be made available to all interested members of the Regents' administrative staff. Oral and written reports of the findings will be presented to the chief executive officers of the two-year colleges at one of their monthly meetings. An oral report of the findings was presented to the chief instructional officers at their monthly meeting in January, 1982.

This written report of the findings of this study is intended to respond to the needs of these and other audiences having an interest in meta-evaluation and state-level program review in general, or in the five-year review of technical associate degree programs as conducted on behalf of the Ohio Board of Regents in particular.
CHAPTER IV
FINDINGS RELATIVE TO UTILITY

An assessment of the utility of the five-year review of technical associate degree programs conducted by the staff of the Ohio Board of Regents follows. The judgments of 37 professionals were sought and obtained. Thirty-one of these professionals had participated in the review over the period 1978-1981 as chief instructional officers or chief executive officers of institutions subject to this review. Six others have been consumers of the results of the review as members of the staff of the Ohio Board of Regents. The following chapters organize their judgments according to the four major attributes of sound educational evaluation identified by the Joint Committee on Standards for Educational Evaluation (1981). Their assessment of the review's utility, feasibility, propriety of conduct, and accuracy will be presented in that order, which is also the order of the four major research questions.

Our discussion first turns to the usefulness of the five-year review. According to the Joint Committee on Standards, an evaluation must exhibit satisfactory achievement of eight characteristics if it is to be useful. The audiences involved in or affected by the evaluation must be sufficiently identified. The individuals conducting the review must be perceived as competent to do so. The information collected should be of such scope and selected in such ways as to address pertinent questions about the object of the evaluation and be responsive to the needs and interests of specified audiences. The perspectives, procedures, and rationale employed to interpret the findings of the evaluation must be clearly described, and the report of these findings must be clear and appropriately disseminated. The release of the findings must be timely. The entire evaluation must be conducted in such a way as to encourage follow-through by members of the audiences (JCS, 1981, pp. 19f).
Audience Identification

Evaluation is an information gathering activity which is preparatory to a decision to be made. The audiences for the evaluation must, therefore, be clearly identified so that their practical information needs must be met.

Whether designated an audience or the client, the fact that the Ohio Board of Regents conducts the five-year review for the purposes of its decision making is a matter of administrative rule contained in the administrative Code of the State of Ohio (Rule 3333-1-04). Further clarification of the Board itself as the primary audience for the five-year review of technical programs would hardly be necessary.

In its official documents describing the review, however, the Board has over the years expanded the intended audience for the review beyond itself to include the institutions participating in the review (OBR, Final Report . . ., 1981). It has done so out of a conviction that the institution itself should benefit from a process of self-examination, directing its attention on a regular and periodic basis to the continued viability of its programmatic commitments. These two audiences are those which have been most clearly identified in the Board's documents as audiences for the five-year review.

The diffuse audience—the public at-large—is addressed through the Board of Regents itself. The Board is a body comprised of nine representatives of the public at-large responsible to that public for the state's system of higher education.

Questions have been raised, however, as to whether the intended audience of the five-year review should not be expanded to include all institutions offering technical programs (whether participating in a given year's review or not) and to include more explicitly as an audience those non-educational governmental agencies which are also accountable to the public for the state's educational system. Doing so would include the Office of Budget and Management and the Legislative Budget Office within the audience of the five-year review. The Office of Budget and
Management is the state agency which prepares the Executive Budget, including the educational appropriation, for the Governor. The Legislative Budget Office advises the General Assembly regarding budgetary matters. That these two agencies are interested in the results of program review found expression in the language of Am. Sub. H.B. 167 of the 114th General Assembly requiring the Board of Regents to report to the legislative leadership and the Director of Budget and Management by September 30, 1982, on the progress of program review efforts.

Participants in this study, therefore, were asked to assess the appropriateness of each of these expanded audiences of the five-year review. Each study participant was asked to indicate the extent to which he agreed that each of the above audiences is an appropriate audience for the five-year review. On the basis of a four point scale, mean scores were derived for each group of study participants. Mean scores (in terms of strength of agreement) were interpreted in accordance with the scale contained in Figure 2. This scale will be used in reporting results throughout this study.

The results of the inquiry into the extent to which study participants considered each of the above audiences appropriate for the findings of the five-year review are contained in Table 1.

That the participant institution must be considered an audience for the findings of the review received nearly unanimous strong agreement. Indeed, only three participants in the study indicated any response less than strong agreement, and they indicated they agreed the participant institution is an appropriate audience. This finding confirms the standard promulgated by the Joint Committee on Standards which wrote that those individuals and groups whose work is being studied must be considered an audience of the evaluation so that their information needs can be ascertained and accommodated (JCS, 1981, p. 21). The Regents have identified the participating institutions in addition to itself as the two major audiences of the five-year review and have evidently identified the audience of the review to the full satisfaction of those participating in the review.
FIGURE 2
INTERPRETATION OF SCALE OF MEAN SCORES

A = Strong Agreement
B = Fairly Strong Agreement
C = Agreement
D = Weak Agreement
E = Weak Disagreement
F = Disagreement
G = Fairly Strong Disagreement
H = Strong Disagreement
Table 1
FINDINGS REGARDING APPROPRIATENESS OF
VARIOUS AUDIENCES OF THE FIVE-YEAR REVIEW

Appropriate Audience: Mean Score = 2.51 - 4.00
Inappropriate Audience: Mean Score = 1.00 - 2.50

<table>
<thead>
<tr>
<th>Study Participant</th>
<th>Participating Institution</th>
<th>All Other Institutions</th>
<th>Legislative Budget Office</th>
<th>Office of Budget and Management</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC CIO</td>
<td>4.00</td>
<td>2.60</td>
<td>2.25</td>
<td>2.25</td>
<td>5</td>
</tr>
<tr>
<td>TC CIO</td>
<td>3.89</td>
<td>2.62</td>
<td>2.20</td>
<td>2.20</td>
<td>9</td>
</tr>
<tr>
<td>UA CIO</td>
<td>4.00</td>
<td>2.66</td>
<td>1.75</td>
<td>2.00</td>
<td>7</td>
</tr>
<tr>
<td>CC CEO</td>
<td>3.66</td>
<td>2.50</td>
<td>2.00</td>
<td>2.50</td>
<td>3</td>
</tr>
<tr>
<td>TC CEO</td>
<td>3.75</td>
<td>2.50</td>
<td>1.50</td>
<td>2.00</td>
<td>4</td>
</tr>
<tr>
<td>UA CEO</td>
<td>4.00</td>
<td>3.66</td>
<td>1.50</td>
<td>1.50</td>
<td>3</td>
</tr>
</tbody>
</table>

Key to abbreviations: CC = Community College  CIO = Chief Instructional Officer
TC = Technical College  CEO = Chief Executive Officer
UA = University Affiliate
Heretofore, however, the Regents have not included all institutions (those not participating in the review during a given year) or other governmental offices within the intended audience of the five-year review. The participants in this study were asked to indicate the extent to which they agreed that all other institutions are an appropriate audience for a given review's results. The chief instructional officers of all three types of institutions registered only weak agreement that all other institutions constitute an appropriate audience, and the chief executive officers disagree, although weakly so. Only the chief executive officers of university affiliates and the Regents' staff itself indicated agreement with any strength at all and the comments of both groups in amplifying their responses indicate that their reasons for considering this group an appropriate audience have less to do with use of the information than with reassurance of equity in the conduct of the review. One Regents' staff member expressed this rationale for including other institutions most clearly by stating that doing so would make all institutions aware that individual institutions were not being singled out, that all institutions go through the same process, and that no institution is abused or "bullied" during the review. All the Regents' staff who agreed, however, qualified their agreement with an expectation that reports sent to non-participating institutions would be of a reduced level of detail and with a proviso that all sensitive material would be deleted. One Regents' staff member, though agreeing that there would be some advantages to such information sharing, worried that some care must be exercised to limit the extent to which the larger community is permitted to influence individual institutional decision making and hence reduce the advantages to be derived from diversity and institutional autonomy. With the concerns and reservations expressed, and the consensus mean score on this item of a 2.74, indicating only weak agreement, it would appear there is less than a striking mandate to the Regents to expand the audience of the five-year review to all other institutions.
The consensus of opinion is not at all equivocal, however, regarding the notion that the Legislative Budget Office and the Office of Budget and Management should be considered an appropriate audience for the review, and hence, their information needs accommodated. Participants in this study solidly disagreed that either the Legislative Budget Office (aggregate mean score of 2.07) or the Office of Budget and Management (aggregate mean score of 2.15) would be an appropriate audience for the five-year review. All seven participant groups registered disagreement with this idea, with strong disagreement (1.50) being expressed by university affiliated and technical college chief executive officers and fairly strong disagreement (1.75) expressed by university affiliated chief instructional officers. The suggestion attracted considerable commentary, the content of which was not differentiated according to participant groups. Most of the comments drawn by this item expressed misgivings concerning the competence of these agencies to reach appropriate conclusions from the results of the review and expressed fear that the results may be misused by these agencies. Respondents noted that the educational administrative functions implicit in a program review process are beyond the purview of such agencies and that these agencies are not qualified to interpret the findings properly. Participants in this study clearly regard these agencies as an insufficiently informed audience, and fear that including them as an explicit audience for the review would invite further intrusion into complex academic decisions they are not capable of making. Several respondents expressed the belief that including these agencies as an audience for the review would reduce the utility of the review, reducing the full and frank disclosure of pertinent findings either because of institutional wariness of the intentions of these agencies or because of what one respondent called the "natural protective inclinations of the Regents' staff."

Although opinion in this regard was overwhelmingly negative, it was not unanimous. Eight of the 37 respondents expressed agreement that the Legislative Budget Office and the Office of Budget and Management are an appropriate audience for the five-year review, but most did so with
explicit reservation. Two such respondents considered the expansion of the review's audience to include these agencies as a logical and justifiable extension of the accountability process. One respondent wrote that the objective findings should be made available to any influential office or individual, and that although certain findings would be of more interest to some specific offices than others, the study participant strongly believed that where there is a need to know, the information should be shared. Others, in expressing agreement qualified their response with an expectation of a reduced level of detail. These six respondents replied that these agencies should have access to the public report of findings and be fully apprised of the Regents' conduct of the review and the priority assigned to program review by the Regents, but full inclusion of these agencies as a specific audience of the review is neither necessary nor desirable.

**Summary: Audience Identification**

On the basis of documentation and these findings, the five-year review of technical associate degree programs appears to have adequately identified its audience as the Board of Regents itself and the participating institution. Such an identification of audience has the strong concurrence of the professionals involved in the review either as participants in the review or consumers of its results. There is little support for expanding this audience to include institutions not participating in the review during a given year, and no support for including the Legislative Budget Office and the Office of Budget and Management as specified additional audiences of the review. The rating of the five-year review on the JCS standard of audience identification is 3.91—the aggregate mean score of appropriateness of the participating institution as the only other audience for the five-year review.
Evaluator Credibility

The usefulness of the results of an evaluation depend heavily upon the extent to which the evaluation's audience perceive that the evaluator is competent to perform the evaluation. According to the Joint Committee on Standards, evaluators are credible to the extent that they exhibit the training, technical competence, substantive knowledge, experience, integrity, human relations skills, and other skills considered necessary to the specific evaluation task (JCS, 1981, p. 24).

For the past four years, the five-year review has been conducted by a two-member team serving on the staff of the Board of Regents. The senior member of the team has been Vice Chancellor for Two-Year Campuses since 1971, prior to which he served as founder and president of the state's third largest community college. One of the state's first supervisors of secondary vocational education, he was instrumental in the development of postsecondary technical education and the state's fledgling two-year college system in the early 1960's. In 1977, the Board of Regents accepted a doctoral candidate intern from the Department of Educational Administration of The Ohio State University, majoring in community college administration with a minor in curriculum and instruction. At the conclusion of the nine-month internship, he was hired as an assistant to the Vice Chancellor for Two-Year Campuses to coordinate the conduct of the five-year review as his primary responsibility. These two individuals have jointly conducted the five-year review of all the state's two-year campuses offering technical associate degree programs. Their credibility as evaluators has never before been formally assessed.

The review of the literature as well as the standard of the Joint Committee underscored the importance of doing so. The issue of "who should bell the cat" is one of the liveliest in the debate over program review and the various responses of the state have been discussed earlier. To assure credibility, states have contracted with out-of-state consultants, commissioned intra-institutional and inter-institutional review committees, as well as opting for agency staff review, as the Regents have done for the five-year review.
The author, therefore, attempted to assess the credibility of the personnel conducting the five-year review by asking study participants to indicate the extent to which they agreed that as the review is currently conceived and conducted, the personnel conducting the review have been competent to do so. The results of this inquiry are contained in Table 2.

These results would seem to indicate a fairly strong (mean score of 3.36) consensus of confidence in the competence of the personnel conducting the review to do so, with the chief instructional officers of all institutions expressing the greatest confidence and the technical college chief executive officers expressing the least (mean score of 2.75). Any conclusions regarding the latter finding, however, would have to be tempered by the extremely small number of technical college presidents interviewed and the comments the dissenting president made in explaining his response.

There are far more reasons, however, to examine these results more closely than only sample size. Responses to this item are the only ones which may not be comparable due to the two different methods employed. This item appeared on a mailed questionnaire to the chief instructional officers, but was included as part of a verbal interview with the Regents and the chief executive officers. Inasmuch as the researcher is one of the two persons whose competence the study participants were asked to assess, the researcher discovered during the first interview that it was necessary to pose the question in a more impersonal manner in the context of the interview situation. Consequently, the researcher presented this interview item as follows:

The following item concerns the general topic of evaluator credibility, but I have been unable to phrase the question in a manner in which you may feel completely comfortable in responding. Let me read to you the way the item presently reads, and then explain to you what I am really getting at:

AS THE FIVE-YEAR REVIEW IS CURRENTLY CONCEIVED AND CONDUCTED, I BELIEVE THE PERSONNEL CONDUCTING THE REVIEW ARE COMPETENT TO DO SO.
### Table 2

**EXTENT TO WHICH PARTICIPANTS AGREED THAT PERSONNEL CONDUCTING THE FIVE-YEAR REVIEW HAVE BEEN COMPETENT TO DO SO**

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Strongly Agreed (N)</th>
<th>Agreed (N)</th>
<th>Disagreed (N)</th>
<th>Strongly Disagreed (N)</th>
<th>No Basis for Judgment/No Response (N)</th>
<th>Mean Score (N)</th>
</tr>
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<tbody>
<tr>
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<td>3.80</td>
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<tr>
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<td>3.71</td>
</tr>
<tr>
<td>ALL CIO</td>
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<td>3.57</td>
</tr>
<tr>
<td>CC CEO</td>
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<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>3.50</td>
</tr>
<tr>
<td>TC CEO</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>2.75</td>
</tr>
<tr>
<td>UA CEO</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3.00</td>
</tr>
<tr>
<td>ALL CEO</td>
<td>1</td>
<td>7</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>3.00</td>
</tr>
<tr>
<td>REGENTS</td>
<td>1</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3.16</td>
</tr>
<tr>
<td>TOTAL</td>
<td>14</td>
<td>21</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>3.36</td>
</tr>
</tbody>
</table>
The point of the question is not really whether you feel we have done a good job, but whether you feel the credibility and usefulness of the five-year review would be improved if we were to use out-of-state consultants, in-state peer review committees, or other such groups. What are your thoughts about this?

The researcher found that such a presentation eliminated any potential discomfort in responding to the issue of evaluator credibility in the interview setting, and despite methodological untidiness, believes it as effectively results in a response truly reflective of the opinion of the interviewed respondent as the guaranteed anonymity did for the questionnaire respondent.

Even with this more open invitation to be critical, however, those professionals who were interviewed expressed confidence in the competence of the personnel who have conducted the review to date, 14 to one. More importantly, however, all but one of these respondents qualified their response with an endorsement of augmenting the review team under various sets of hypothetical circumstances. Five respondents stated that they believed the review would be strengthened by augmenting the visitation team with in-state expertise, noting that two individuals simply could not adequately "cover the waterfront" of the myriad technical programs offered throughout the state. This belief intensified to the extent that the respondent believed the review should address itself to program quality and disappeared altogether to the extent that the respondent regarded the review as confined to a review of compliance with general standards and maintenance of acceptable efficiency. By far the bulk of the respondents fell into the former category.

Institutional personnel emphasized the strength the review would gain through the addition of expertise specifically needed to draw inferences regarding the quality of specific programs. Regents personnel emphasized the need to share the burden of making what may well be increasingly difficult decisions of program paring by differential quality assessment. Neither group felt it necessary to go out of state for the membership of a peer review committee unless in-state expertise was unavailable or unless doing so becomes a political necessity. Both
groups, however, endorsed the idea of adding peer review committees to the five-year review, particularly if the review makes a serious attempt to assess quality of programs.

One respondent commented that although current personnel are competent to coordinate the process, the review—as it is currently conceived and conducted—misses a major opportunity to build a collegial sense of responsibility for the quality of the enterprise. He expressed his strong belief that the use of a peer review committee system would significantly enhance the review's utility by assuring credibility to the process. Additional advantages to be derived by involving faculty in peer review committees—aside from dissolving faculty anxieties about program review as their participation in it increases—are that doing so more appropriately distributes the academic responsibility to the academics involved, it encourages "peer modeling" and the exchange of professional views, and finally, it guarantees fairness. The model sketched by this respondent envisioned an ad hoc task force for each technology (or closely allied technologies) comprised of selected faculty drawn from institutions not undergoing review during a given year. Their reports would be submitted to a standing review committee comprised of chief instructional officers which would review all such reports and make recommendations to the Vice Chancellor for Two-Year Campuses who would forward his recommendations to the Chancellor. Under this model, the Chancellor could at this point call in an out-of-state consultant at his discretion prior to forwarding his recommendations to the Board for final action.

Another model suggested by two respondents would be somewhat simpler than that proposed above. It would simply add a technical faculty resource person from each technical category offered (business, health, engineering, agricultural and natural resources, and public service technologies) to the review site visit phase. In either case in varying degrees respondents indicated a need for additional expertise as the review moves toward an assessment of quality.
Summary: Evaluator Credibility

As the five-year review has been heretofore conceived and conducted, the personnel conducting it seem to have enjoyed a high degree of confidence in their competence. This confidence, however, may have been contingent upon respondents' perception of the five-year review as a general compliance review, i.e., this expression of confidence (a fairly strong 3.36 aggregate mean score) may have more to do with the manner in which the review itself is perceived than with the competence of the personnel conducting it. On the strength of the comments solicited from the Regents and the chief instructional officers, however, it would appear there is a strong belief that as the review moves toward an assessment of quality, the competence of the Regents' staff personnel who have conducted the review must be augmented with specific expertise available within the faculties in the state. The consensus rating of the five-year review as it has been conceived and conducted to date, however, with regard to evaluator credibility is a 3.36.

Information Scope and Selection

The third standard promulgated by the Joint Committee on Standards is intended to optimize the usefulness of evaluations by ensuring that all the information collected for the evaluation is of such scope and is selected in such ways as to be responsive to the needs and interests of the specified audiences. In addition to being of sufficient scope and appropriately selected, the Committee asserts that all information requested must be pertinent to the purposes of the evaluation (JCS, 1981, pp. 27-29). Considerable attention has been devoted to these issues in the literature concerning state program review.

Basic to satisfactory compliance with this standard is the specification of criteria upon which programs are reviewed. A review of the Regents' documents pertaining to the five-year review revealed that heretofore the staff of the Board of Regents have explicitly identified three criteria upon which they have reviewed technical associate degree
programs. These criteria are program need, program quality, and program productivity. The review of the literature also revealed the use of two additional criteria frequently used by other states and either selectively or implicitly used by the Regents' staff in the five-year review—program duplication and program cost. The specification of these five criteria must be viewed as adequately describing the needs and interests of the specified audiences of the review, but the extent to which the information selected for the review is pertinent to these purposes had not been formally investigated prior to this study.

Respondents to this study, therefore, were asked to indicate the extent to which they agreed that each item of information requested for the five-year review is pertinent to the issue (criterion) it is used to address. All the possible uses of each item of information were presented to the respondents, whether actually used in that manner in the past on a regular and explicit basis or used implicitly or obliquely on a selective basis. Results are reported by criterion as follows.

Program Duplication

As reported in the review of Regents' documents pertaining to the five-year review in Chapter II, the review has only infrequently addressed the issue of program duplication. That it has not done so, however, is not indicative of an absence of Regents' concern with this issue. Indeed, the statute cited as its source of authority for the conduct of the five-year review, Ohio Revised Code 3333.04(F), is specific only in regard to duplication as cause for the Regents to recommend program elimination. All other criteria have been adopted under the "other good and sufficient cause" language.

The manner in which the review has been organized, and institutions scheduled for it, coupled with state policies defining service areas for the state-assisted two-year campuses, however, has been thought to render the issue of program duplication moot in most cases. As discussed earlier, the initial scheduling selection of institutions for the five-year review was based primarily upon selection criteria of a number of
programs offered and institutional type. The objectives of such a selection were to achieve a rough equivalence in the total number of programs to be reviewed during each year (approximately 150), and to achieve a roughly proportional representation of community colleges, technical colleges, and university affiliates in the number of institutions to be reviewed each year. These two objectives, in conjunction with the initial decision to organize the review institutionally rather than laterally by program, eliminated duplication as a review criterion for all practical purposes.

State policy on the establishment of two-year colleges, moreover, has largely neutralized the issue of duplication to the extent that the technical programs offered by a two-year campus in Ohio are designed to serve the needs of that institution's official district or assigned service area. So long as an institution's programs are targeted to the needs of the citizens of its own district, and so long as there is but one state-assisted institution offering technical education in the territory encompassed by that district, the issue of duplication is indeed moot. It is particularly so, under these circumstances, during an era of enrollment expansion.

These circumstances do not prevail throughout the state, however, despite state policy. In two major metropolitan centers—Cincinnati and Toledo—two former municipal universities have developed technical education programming which at least "geographically co-exist" with the programming of a state-assisted technical college, and in each of two other areas of the state—the Cleveland metropolitan area and the Akron-Canton area—two separate state-assisted institutions offer technical programs on campuses within a 15 minute drive of each other, drawing students from the same population base. During two of the past three five-year reviews, therefore, the staff of the Board of Regents have confronted the issue of duplication by an accident of schedule, using only such information sources as had already been built into the process.

There is another reason to investigate the present capacity of the five-year review to examine the program duplication. As enrollments
stabilize or even decline, there is reason to believe the Regents will be far more interested in consolidating programs offered by proximate institutions when there is evidence they are fracturing between them enrollments which would assure the critical mass necessary to support only one such program. The forthcoming "Master Plan" is certain to include greater attention to program duplication as a basic criterion for reviewing programs. That attention will undoubtedly focus more sharply upon actual service patterns to population concentrations, with less reverence for geographic boundaries which in some instances artificially delimit assumed areas of service.

Four items of information have been used by the staff of the Regents in those rare instances when program duplication has been encountered during the five-year review. A program inventory listing all the associate degree programs offered by the institution has been used to trigger the investigation when two proximate institutions have been reviewed during the same year. Enrollment reports have been used to ascertain the extent to which both duplicate programs have been able to attract a critical mass sufficient to support both programs. A report of the degrees awarded in both programs has been used to determine whether each program has produced a number of graduates each year to justify continued co-existence, and a job placement report has been used as evidence of the extent to which the local labor market is capable of absorbing the graduates from two programs of the same type and appears to be willing to do so more or less equally.

As reported in Table 3, there was fairly strong agreement among study participants (mean score of 3.31) that the program inventory is indeed pertinent to the issue of program duplication. The only dissent from this general agreement was registered by two university affiliated chief executive officers, one of whom, located in a geographically remote area of the state, based his disagreement upon what he regarded to be the irrelevance of the criterion itself to his institution. The other disagreed only because he felt the Regents already possess information regarding the location of various programs sufficient to launch such an
### Table 3

**ASSESSMENT OF PERTINENCE OF INFORMATION SELECTED TO CRITERION OF DUPLICATION**

<table>
<thead>
<tr>
<th>Item of Information</th>
<th>Assessment of Pertinence *</th>
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<tbody>
<tr>
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<td>CC</td>
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<tr>
<td>Program Inventory</td>
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<td>Enrollment Report</td>
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<td>Degrees Awarded Report</td>
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</tr>
<tr>
<td>Graduate Placement Report</td>
<td>3.00</td>
</tr>
</tbody>
</table>

* 4.00 - 2.51: Information is pertinent
1.00 - 2.50: Information is not pertinent
investigation. The third university affiliated chief executive officer agreed the program inventory is pertinent to the question, but cautioned that it must be used in conjunction with the program summary inasmuch as proximate institutions may be offering substantially different programs under the same title by force of the Regents' expectation that campuses adhere to a statewide standard taxonomy of technical program titles. Finally, one technical college chief instructional officer declined to assess the capacity of the review to assess duplication due to its expressed conviction that competition between programs is desirable; hence duplication is not a problem which should be addressed by the review. Such a view was expressed by no other respondent, and there is little doubt the Regents would not subscribe fully to such a position. The consistency and strength of response from the remaining respondents, however, 86.5 percent of whom either agreed or strongly agreed that the program inventory is pertinent to the issue of program duplication, confirms its inclusion among those indicators of program duplication.

The use of enrollment reports in conjunction with an investigation of program duplication received somewhat less support, but the mean score of all respondents (3.03) for the pertinence of this information still indicated solid agreement that it can be used for this purpose. Only three study participants did not agree that enrollment information is pertinent to the issue of duplication, and the only dissenter who amplified his response explained that he based his disagreement upon the accuracy of the information itself—not its use for this purpose. Enrollment reports must, therefore, be judged as pertinent to the issue of duplication when it is addressed during the five-year review.

The report of degrees awarded consistently received the least support of all the indicators used by the Regents in the five-year review for any criterion. While 71.4 percent of the study participants either agreed or strongly agreed that the number of degrees awarded is pertinent to the issue of program duplication, and while the aggregate mean score of 2.85 is still well within the range of general agreement, the outright
disagreement of three of the study's seven participant groups is worthy of note. Mean scores of the technical college chief instructional officers and community college chief executive officers (2.33) indicated disagreement, albeit weak disagreement, that the number of degrees awarded is pertinent to the issue of program duplication. University affiliated chief executive officers solidly disagreed (mean score of 2.00). In general, there is considerable wariness regarding the use of the number of graduates of a program as an outcome measure irrespective of the review criterion. These misgivings will be fully explored in the discussion of subsequent findings, but inasmuch as no specific comments were directed toward the use of this information in the investigation of program duplication, it should suffice to conclude there is adequate agreement that the number of graduates produced by two programs is pertinent to the issue of program duplication, but that continued use of this information as an indicator on any criterion should be contingent upon a satisfactory response to concerns regarding this indicator.

The final item of information used in investigating program duplication is the job placement report. The aggregate mean score given by study participants (2.85) indicates agreement that this information is pertinent to the question of program duplication. Technical college chief executive officers and Regents' staff were the only two groups expressing belief that job placement information was not pertinent to program duplication. None of the three technical college presidents amplified their responses to this item so we cannot know why they responded as they did. The fact that all technical college chief instructional officers responding to the item either agreed or strongly agreed that job placement is pertinent to this issue suggests the presidents' responses may be idiosyncratic. That the Regents' staff expressed misgivings concerning the pertinence of placement data to the issue of program duplication may be surprising until one considers the fact that the Regents have typically approached program duplication as an issue relating to input irrespective of output. Stated another way,
the fact that two duplicate programs in the same area are able to place their graduates in jobs related to their training does not mitigate the fact of duplicate faculties using duplicate equipment to produce the same product without realizing the economies of scale which consolidation into one program could bring. Viewed in this manner, duplication is a spin-off of two other review criteria—cost and efficiency. Evidently the institutional viewpoint is that duplication must be referenced to the review criterion of need, i.e., if the community needs both programs as reflected by labor market demand sufficient to absorb the graduates of both, duplication is tolerable. Obviously, the use of placement information in assessing program duplication suggests that the institutional view of program duplication has prevailed among the Regents' personnel conducting the five-year review, but the latter must realize the divergence of opinion within the Regents' staff regarding such an approach. As the review more seriously begins to examine program duplication, it will become increasingly important to resolve this difference of opinion within the staff of the Board of Regents. With this one qualification, however, one must conclude on the strength of the opinion of 23 of the 28 institutional presidents and chief executive officers responding to this item that the participants in the five-year review do regard job placement as pertinent to any consideration of program duplication.

Summary: Findings Relative to the Scope and Selection of Information for Assessing the Program Duplication Criterion

All four items of information which have been used by the Regents' personnel in the past in assessing the criterion of program duplication have been judged pertinent to that issue by a consensus rating of study participants. Use of the number of degrees awarded for this purpose, however, should be reexamined in light of other findings of this study regarding this indicator (e.g., Information Scope and Selection: Need). It may also become important in the future to resolve the internal ambivalence within the staff of the Board of Regents concerning the use
of output information such as job placement in its consideration of the implications of program duplications. These qualifications aside, the overall rating by study participants of the pertinence of information selected to assess program duplication in the five-year review is 3.01—solid agreement the information is pertinent.

Quality

In perhaps no area have the staff of the Board of Regents conducting the review been as equivocal and ambivalent as they have been in dealing with the review criterion of quality. On the one hand, in verbal reports to the Board of the results of the review, the staff have assured the Board of the high quality of the programs recommended for continuation, and have commended institutions for the high quality of their programs in review letters. Subsequent reports to the Board, however, have conceded that the issue of quality has not been addressed directly, but that it had been addressed indirectly in a manner sufficient to provide adequate assurance of quality. Elsewhere, however, one of these staff members has despaired in print of selecting appropriate measures of quality for well over 150 discrete technical programs, preferring to replace the criterion of quality with one of "effectiveness," thereby equating the two terms. As noted in Chapter II, few states conducting program reviews even purport to examine program quality (Barak and Berdahl, 1978), either following Millett's recommendation that such an assessment be left to accrediting associations (Millett, 1979) or following the same abnegation of responsibility the Regents themselves expressed in the 1976 Master Plan ("the primary responsibility for quality control rests with each individual college and university."). Edward Q. Moulton, current Chancellor of the Ohio Board of Regents, has argued both publicly and privately, however, that program quality is the crux of program review and accountability. Finding that a program is non-duplicative may simply mean that commuting students have no alternative to a program of poor quality. Finding that a program is offered efficiently and
cheaply says nothing about whether the program is of a level of quality justifying offering it all. Finally, if the citizens of an area or the state need a program and commit their taxes to its support, they deserve the best program possible within the limits of those resources. Each of the other criteria used in the five-year review beg the question of how good the program under review is. In Moulton's view, anything less than a full response to this question is temporizing at best and sophistry at worst. It has become increasingly clear that members of the Board of Regents also expect some assessment of program quality to be made. Clearly, the five-year review must take a less ambiguous approach to the criterion of program quality. Of interest in this section, therefore, is the extent to which study participants agree that the information already collected for the purposes of the five-year review is pertinent to the question of program quality.

In oral reports to the Board over the past four years, the Regents' staff have cited six items of information requested for the review which they have used to assess the quality of technical associate degree programs. More precisely, they have investigated the "qualitative implications" of the following items of information. The first of these is a program summary which lists the courses required for the associate degree, arrayed by quarter. This information includes course titles, and the weekly number of clock hours students must commit to both lecture and laboratory experiences to earn the credit hours carried by the course. The program summary also designates the curricular function of each course—technical, basic/related, or non-technical/general studies. The second item of information is a listing of courses not otherwise required in any degree program which are offered by the institution as electives. The third item is a faculty report listing the name of each full-time technical faculty member, the courses he/she teaches, degrees earned and the date the degree was awarded, and the number of years of experience other than teaching he or she has had in actually working in the technical field for which he or she is
responsible. The fourth report which has been used for purposes of quality assessment is a listing of the names and addresses of the members of each program advisory committee and the number of times each committee met the previous year. Finally, enrollment and placement reports have been used as indicators of quality, on the assumption that over time, students themselves will gravitate away from programs of poor quality or will drop out of them at an abnormally high rate, and that similarly, over time employers will not hire the graduates of programs they have perceived as producing underprepared employees. These six items of information have been used by Regents' personnel in providing the Board with what they have called an "adequate assurance of quality"; study participants were asked to indicate the extent to which they agree that the above items are actually pertinent to the issue of quality. Their responses are reported in Table 4.

The consensus opinion of the study participants was that the program summary listing the requirements for the degree is indeed pertinent to an assessment of program quality. As a group, the Regents' staff were most convinced of the pertinence of this information to quality and the chief executive officers were least convinced. Twenty-eight of the study's 37 respondents (75.7%) either strongly agreed or agreed that this information is pertinent. One of these respondents amplified his response by noting that how a program is delivered is essential to any consideration of quality, and determining that the design of a program is reasonable is vital to the issue of quality. The classification of courses according to their basic, technical, and general studies function, he added, speaks directly to whether technical programs are indeed collegiate in nature and not merely training. In his view, such a showing is essential to finding a program of a level of quality expected of higher education. Three agreed, with reservations, one of whom questioned the extent to which a quarterly array of the requirements has any bearing upon the quality of the program, and another agreed with the proviso that the program summary is used in conjunction with other information. Those who disagreed conceded that while this information may be pertinent to
## Table 4

**Assessment of Pertinence of Information Selected to Criterion of Quality**

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<th>Item of Information</th>
<th>CC</th>
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<th>TC</th>
<th>CIO</th>
<th>UA</th>
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<td>3.29</td>
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<tr>
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<td>2.95</td>
<td>3.00</td>
<td>3.00</td>
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<td>3.43</td>
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<td>3.00</td>
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*4.00 - 2.51 = Information is Pertinent
1.00 - 2.50 = Information is not Pertinent*
determining institutional compliance with Regents' rules regarding curricular distribution (Rule 3333-1-04), this is not the same thing as determining the quality of a program. A listing of courses, wrote one, says little about the quality of those courses and hence the program to which they contribute. These comments notwithstanding, study participants as a whole solidly agreed that the program summary is pertinent to the issue of program quality.

Nearly the same level of endorsement was given the pertinence of the listing of electives (aggregate mean score of 2.97). This item generated about the same comments as those made regarding the program summary, with only eight of the 37 respondents (21.6%) judging the information as not pertinent to program quality. Half of all the university affiliated participants disagreed, citing insufficiency of the information as the most common reason for them judging the value of the information in assessing quality as dubious. Two respondents, while agreeing that the information is pertinent to quality, worried that undue emphasis upon program flexibility as represented by the number of technical electives may actually reduce quality and dilute the focus of technical programs. This is a qualitative issue, however, to which the listing of technical electives would speak. A fair summary of the judgment of the study participants would be that although the listing of electives by itself is incomplete and must be used in conjunction with other information, it is pertinent to the criterion of program quality.

In the judgment of study participants, clearly the information most pertinent to program quality is the report of faculty credentials. All seven participant groups agreed or strongly agreed that this information is pertinent and the aggregate mean score of this item was a fairly strong 3.38. One respondent suggested the same information be collected for part-time as well as full-time faculty due to the fact that significant portions of programs are being delivered by part-time faculty. Another suggested that in addition to requesting information regarding academic preparation and work experience, the Regents should request information related to continuing professional development. In
general, however, respondents indicated fairly strong belief that the information currently collected regarding faculty is pertinent to the criterion of program quality.

Significantly less confidence was expressed in the advisory committee reports currently collected. Chief executive officers disagreed outright (mean score of 1.90) that the information is pertinent to the question of quality, and their comments (and those of respondents who agreed that the information is pertinent) expressed a common theme. Based both upon these comments and subsequent responses to items regarding advisory committees (cf. Valuational Interpretation—Appropriateness of Advisory Committee Standard), study participants believed fairly strongly that advisory committees are essential to technical programs of high quality. Asking institutions to report the names and addresses of advisory committee members, however, and merely asking how many times the committee met during the year prior to the review, was viewed by at least one-third of the study participants as inadequate. In short, the information does not go far enough. Several participants noted that a report of the number of meetings says nothing about the extent to which the advisory committee's input is either sought or provided. Others echoed this belief, stating that meetings may be convened more for form than substance and that the information does not specifically assess the composition and representativeness of the advisory committee. Several remedies were suggested, including requesting minutes of advisory committee meetings, position titles of advisory committee members, and interviews with advisory committee members during the site visits conducted as part of the review. On this item, therefore, this study found that information regarding advisory committees is pertinent to the assessment of the quality of technical associate degree programs, but that the information currently requested for the five-year review is of insufficient scope for this purpose.
As discussed earlier, Regents' personnel conducting the five-year review have also used enrollment reports as a possible indicator of quality when enrollments have declined in a program each year over the period subject to review and when there is evidence of abnormally high attrition. The rationale for raising the qualitative issue has been the possibility that students may be "voting with their feet" on the quality of the program. Only the chief instructional officers as a group seem to share this view, and even they did not agree very strongly (mean score of 2.81) that enrollment reports were pertinent to the question of quality. Technical college and university affiliated chief executive officers disagreed fairly strongly that there is any correlation between enrollments and quality, and as a group, chief executive officers registered a mean score of 1.90—solid disagreement. Regents' staff participants were evenly divided on the pertinence of this information to quality, and the entire group of study participants was nearly so, with 18 participants either strongly agreeing or agreeing and 19 participants either disagreeing or strongly disagreeing that enrollments are pertinent to quality. The mean score of the study participants given to the pertinence of this information was a barely approved 2.51. Clearly, enrollment reports appear to be the weakest indicator of quality of all the information currently requested by the Regents, and if used at all in the future for this purpose, should be used only as a triggering mechanism for the application of techniques to assess quality more directly.

The final item of information used in the five-year review for quality assessment is the job placement report. It has been thought to be the most direct measure of the extent to which a technical program actually accomplishes its primary objectives—the preparation of students for employment in a specific technology at the conclusion of his associate degree studies. Goal achievement has, therefore, been equated with quality, and only six of the 37 participants in this study disputed the pertinence of this placement information to any assessment of the quality of technical programs. Indeed, its mean score for pertinence by
the entire group of participants of 3.13 was second only to the qualifications of the faculty as an indicator of quality. Interestingly however, all three university affiliated chief executive officers disagreed. Two of these respondents stated that a program's placement rate relates far less to the quality of the program than to conditions of the local job market, and high labor market demand would force employers to hire the graduates of the poorest of programs possessing a modicum of familiarity with the equipment required in the technology. In the view of the third university affiliated chief executive officer, program quality is entirely a matter of process evaluation, and that the use of outcome measures such as placement is too crude to be useful. In the judgment of 31 of the 37 participants in this study, however, a technical program's placement record is pertinent to an assessment of the criterion of quality.

Summary: Findings Relative to the Scope and Selection of Information for the Assessment of the Quality Criterion

In the judgment of the professional educators responding to this study, five items of information currently collected during the five-year review process are pertinent to the assessment of the quality of technical associate degree programs. The report of faculty qualifications and the placement report were seen as most pertinent, followed by the program summary and listing of electives provided they are used in conjunction with other information. While the pertinence of information regarding the utilization of advisory committees was not disputed, the scope of the report currently used was judged inadequate to this purpose and a number of remedies were suggested to strengthen the potential of this report. A significant degree of doubt, however, was expressed concerning the pertinence of enrollment data to an assessment of quality. In view of the considerable ambivalence this item generated, enrollment reports should probably not be used in the future as an indicator of quality, but should be confined to use as a triggering mechanism for a more thorough assessment of quality.
That the five-year review should approach the issue of program quality less ambiguously than it has in the past is as significant a finding as the above findings on pertinence of information. The emphasis placed upon the importance of such an effort by the current Chancellor of the Board of Regents strongly suggests it will. Summary comments by a number of the respondents in this study also indicate support of assessing quality during the five-year review. One study participant wrote that this criterion was of primary importance, stating that reviews that assist in maintaining or promoting excellence are appropriate, and that simply to verify compliance with state standards is a secondary function of program review. Another chief instructional officer wrote that failure to confront the issue of quality in the five-year review process suggests to faculty that the state's only concern is enrollment and efficiency, and not the educational process. One Regents' staff member stated:

There should be some attempt directly to sample quality—not that we should run at it full-bore—but there should be a more direct attempt made to investigate the deployment of faculty, their preparation relative to their instructional assignments, the actual effectiveness of advisory committees, and other academic issues. This would no doubt involve a process review in that I doubt we will find any outcome measures of quality. However, some attempt should be made (Interview notes).

Finally, with regard to the use of this criterion in the five-year review, the findings of this study concerning evaluator credibility must also be kept firmly in mind. To the extent that quality is assessed in the five-year review, some means of assuring the addition of specific faculty expertise to the review process must be found. In the collective judgment of the participants in this study, however, information which is pertinent to the assessment of quality is currently available within the five-year review data. The review's over-all rating of the pertinence of information selected to assess program quality is 2.95.
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Need

The third criterion addressed during the five-year review is that of program need. The Board of Regents approves programs in the first instance based upon an objective showing of need. The need must be sufficiently compelling to justify to the Regents' satisfaction the authorization of a program commitment which will consume state tax resources. Having approved a program on the basis of need, a showing that it continues to be needed after up to five years of operation is a natural expectation during the review process. Continued need for a program is particularly relevant to the review of technical programs, which claim as their primary objective the preparation of students for jobs in response to the needs for particular types of technicians as articulated by local employers or demonstrated by local employment statistics. Technical programs are not, therefore, disciplines which convey the eternal verities such as can be claimed by departments of history, philosophy, and literature. Their continued place in the technical curriculum of a two-year college is wholly contingent upon the continued need for their graduates. To assess continued need during the five-year review, the Regents' staff have relied upon three items of information. These three items are the report of enrollment, the report of placement, and the report of degrees awarded. The two-year campus staff of the Board has consistently defined adequate program need as the convergence of adequate student demand for a program as reflected by enrollments and adequate labor market demand, as reflected by the placement record of graduates over the previous five-year period. The report of degrees awarded is used as a measure of the extent to which the institution has been able adequately to respond to the needs documented at the time of program approval. The underlying rationale for the use of the report of degrees awarded in assessing program need is the belief that programs which are unable to produce a number of technicians commensurate with the local need should probably expend the resources consumed by this effort to address needs which are equally compelling for which productivity would be higher. Thus the existence of student demand and labor market need in the
absence of a level of productivity justifying the effort may lead to the conclusion that the needs for other programs, in relation to the need for the program in question, are more compelling. The pertinence of these three items of information to a consideration of the criterion of need was rated by the study participants. Their responses are summarized in Table 5.

Study participants agreed fairly strongly (consensus score of 3.35) that the enrollment report is pertinent to a determination of continued need for a program. All three groups of chief instructional officers and the Regents' staff participants agreed most strongly. Only six participants disagreed that this information is pertinent, but among these six were all four of the technical college chief instructional officers. Their dissent was based primarily upon a philosophical disagreement with the notion that the need for a program is determined both by adequate student demand and labor market demand. In their view, need is a function only of the latter. All other participant groups, however, either strongly or fairly strongly agreed that student demand is pertinent to establishing the need for a program.

The same consensus mean score of pertinence of 3.35 (indicating a fairly strong agreement) was given by the study participants to the use of job placement reports in establishing continued need for a program. All seven participant groups strongly agreed, fairly strongly agreed, or agreed with the pertinence of this information. Strongest agreement (3.75) was expressed by the technical college chief executive officers—a position consistent with the above conviction that program need should be determined entirely by labor market information.

The use of the degrees awarded report, however, in determining need (or more accurately, judging among conflicting needs) generated considerable controversy among study participants. Among the seven participant groups, only the Regents' staff strongly agreed that the number of degrees awarded is pertinent to need. As a group, chief instructional officers agreed this data is pertinent, but chief executive officers of all three types of institutions were nearly unanimous in disagreement. Objections
## Table 5
### ASSESSMENT OF PERTINENCE OF INFORMATION SELECTED TO CRITERION OF NEED

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<th>Item of Information</th>
<th>Assessment of Pertinence *</th>
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<tr>
<td>Placement Report</td>
<td>3.40</td>
</tr>
<tr>
<td>Degrees Awarded</td>
<td>3.00</td>
</tr>
</tbody>
</table>

* 4.00 - 2.51 = Information is Pertinent
* 1.00 - 2.50 = Information is not Pertinent
centered upon the fact that for most technical programs, associate degree completion is neither required nor particularly desired by either students or their employers. Programs may meet pressing needs of students for jobs and employers for trained personnel without resulting in a single associate degree graduate. Numbers of students enroll in the courses comprising a program without ever intending to graduate and meet their needs by enrolling in selected courses. Employers also deflate degrees awarded figures by hiring students away from their programs as soon as they have achieved a level of technical competence of use to that employer. One community college president commented that the number of graduates is only one small measure of the extent to which needs are being met by a program and it is not the best one at that. He termed the use of such data for such a purpose as "insufficient and slippery," recommending that institutions conduct exit interviews of students as they leave the institution as being a more valuable measure of the extent to which their needs have been met by a given program than merely counting degrees.

While these objections cannot be ignored, and while the Regents' staff must recognize that there are services performed by an associate degree program other than those measurable by the number of degrees awarded, the findings of this study do not suggest that the Regents' staff abandon the use of the degrees awarded report as an indicator of program need, particularly if this indicator is used in conjunction with the enrollment and placement reports. There is sufficient agreement that while the scope of the information may be incomplete, the information is pertinent to an assessment of need so far as it goes. More attention will be devoted to the issue of degrees awarded in the subsequent discussion of valuational interpretation.

Summary: Findings Relative to the Scope and Selection of Information for the Assessment of the Need Criterion

Participants in this study concurred fairly strongly that the enrollment reports and placement reports used during the five-year review
are pertinent to the assessment of the continued need for a technical program. With the chief executive officers dissenting, study participants agreed that the number of graduates of a program each year is pertinent to the criterion of program need, but careful use must be made of this data in conjunction with enrollment and placement reports prior to drawing any inferences from it. Attention should be given to the identification of other means of more fully capturing the range of needs served by technical degree programs than the degrees awarded report affords. Despite this latter controversy, however, the overall rating for the five-year review for the pertinence of information it employs in the assessment of program need is a 3.16.

Productivity

The fourth criterion addressed during the five-year review is productivity, a term commonly equated with efficiency (Millett, 1978). It is defined as the relationship between input costs and units of output. It is more clearly understood as the criterion by which the program reviewer investigates the yield on the investment the state has made in a particular academic program. The three items of information which have been used to assess the productivity of technical associate degree programs are the enrollment report, the report of degrees awarded, and the job placement report. Study participants were asked to assess the pertinence of these three items of information to the question of productivity and the ratings they gave the three items are reported in Table 6.

All seven participant groups indicated varying degrees of agreement that the enrollment report is pertinent to the issue of productivity. Chief instructional officers as a group believed this information was pertinent most strongly among the seven groups (mean score = 3.45), and chief executive officers believed so least strongly (mean score = 2.80). While the consensus mean score on the pertinence of enrollment data to the issue of productivity was a 3.25—indicative of solid agreement—comments made by respondents who both agreed and disagreed on the
## Table 6

**ASSESSMENT OF PERTINENCE OF INFORMATION SELECTED TO CRITERION OF PRODUCTIVITY**

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<tr>
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</tr>
<tr>
<td>Placement Report</td>
<td>3.40</td>
</tr>
</tbody>
</table>

* 4.00 - 2.51 = Information is Pertinent
  1.00 - 2.50 = Information is not Pertinent
pertinence of the information identified two significant weaknesses in the scope of the enrollment information collected as it relates to productivity.

The first of these weaknesses is the definition of an enrollment unit as a student major in the program. Students with other majors taking selected courses from the program under investigation, part-time students enrolling in selected courses for non-degree purposes, and unclassified students who have not yet declared majors can together represent significant service which would not be captured by an enrollment report which requests a count only of student majors. Hence two university affiliated chief executive officers suggested the Regents use course enrollments or credit hours generated rather than student majors as the measure of output to be used in assessing productivity.

The second major weakness identified by the respondents is the absence of specific financial data among the items used for the assessment of productivity. Productivity is a ratio of outputs to dollars expended. None of the three items used to assess productivity include financial information. Half of the ratio is missing. This information will be discussed in greater detail in the following section concerning the cost criterion. Let it suffice for the present to say that the use of any of the three items of information currently used to assess productivity must by used in conjunction with specific financial data. It is simply not accurate to equate low enrollments with low productivity on the basis of intuitively assumed costs. Low enrollments will usually mean low productivity, but not always; conversely, high enrollments may actually mean low productivity if low student:faculty ratios set by external accrediting agencies must be adhered to. Clearly, despite general agreement that enrollments are pertinent to an assessment of productivity, "enrollments" should be redefined as "student credit hours" generated by annual enrollments in the courses comprising a program under review, and these must be used in conjunction with financial data.

The use of the report of the number of degrees awarded drew even less support in the assessment of productivity than it did in the assessment
of need. The consensus score given by the entire study group to this report (2.63) indicated only weak agreement that this report is pertinent to an assessment of productivity. The most significant shift in opinion occurred among the Regents' staff participants, who expressed far less confidence as a group in the use of this report for assessing productivity (2.83) than they expressed for its use in assessing need (3.66). Again, chief executive officers were nearly unanimous in disagreement; only two considered the report pertinent to productivity. Based upon the mean score given this item by the group as a whole, however, and the fact that 57% of the respondents concurred that this information is pertinent, the report of degrees awarded may continue to be used in the assessment of productivity provided it is used in conjunction with financial data and subject to clarification by subsequent findings of this study, specifically those relating to the standard of valuational interpretation (cf. Valuational Interpretation—Valuational Consonance: Number of Graduates).

Strangely enough, inasmuch as the basis for the placement report is the number of graduates produced by a program, the use of the placement report as an indicator of productivity attracted far less opposition from the chief executive officers than the use of graduate data. Dissensus was still significant, however, among chief executive officers with opinion evenly divided on the pertinence of the information. The Regents' staff were only slightly more comfortable with the use of job placement as the output measure for assessing productivity, registering a group mean score of 2.60—the weakest agreement possible given the size of the group. All three groups of chief instructional officers, however, agreed that this information is pertinent to a consideration of productivity, and the strength of their agreement (3.20) neutralized the uncertain results obtained from the chief executive officers and the Regents' staff. The aggregate mean score of 2.83, however, while indicating that the placement report may continue to be used in the assessment of the productivity of technical associate degree programs strongly suggests that it should be used with caution, not only because
of the significant level of dissensus within several participant groups but also because of the findings regarding the last item's use for assessing productivity. Stronger support for the use of the placement report than for the report of degrees awarded--upon which the former is based--must be regarded as an artifact reflective of technical educators' philosophical commitment to job placement itself--not its use as a measure of productivity. If used, therefore, it too must be used with caution, in conjunction with financial data, and subject to clarifications resulting from findings regarding valuational interpretation which will be subsequently discussed (cf. Valuational Interpretation--Appropriateness of Standards: Number of Graduates).

Summary: Findings Relative to the Scope and Selection of Information for the Assessment of the Productivity Criterion

Of the three items of information currently used by the staff of the Board of Regents in the five-year review for assessing program productivity only the enrollment report received a clear judgment of pertinence from all seven participant groups. While judging the information pertinent, participants indicated their belief that the information is currently of insufficient scope to be used for this purpose, suggesting that the definition of enrollments be expanded to include student credit hours generated by enrollments in the courses comprising a program rather than student majors alone. This information is readily available from the Academic Period Enrollment Report already submitted to the Regents for purposes of subsidy calculation. Objections to the use of the degrees awarded report and the placement report were not sufficient to support a conclusion that these items should be excluded from any consideration of productivity, but they were of sufficient magnitude to suggest that if used at all, they should be used with extreme caution and probably used only if the use of enrollment reports alone is judged inadequate. While the use of multiple indicators in the assessment of programs on any one criterion is an ideal, in this particular case exclusive reliance upon course enrollments as the unit of output for use
in expressing productivity may be preferable to using either of the other two items in view of the significant disagreement concerning their use.

Finally, of utmost importance in assessing productivity is the inclusion of specific financial information to make an actual productivity ratio possible. The use of intuitive or inferred cost assumptions severely impairs any capacity to assess program productivity.

The above suggestions, criticisms, and weaknesses notwithstanding, study participants rated the pertinence of information currently selected for the assessment of program productivity at a relatively solid 2.93. It must be kept in mind, however, that this overall rating results from the strength of agreement concerning the pertinence of enrollment information and the judging of the strength of agreement concerning placement data as a valuational artifact.

Cost

The fifth and final criterion of interest in state program review is program cost. As might be inferred from the absence of financial data from consideration of program productivity, the five-year review has been as ambiguous in its approach to this criterion as it has to the criterion of quality. In Chapter II, the author noted that the criterion of cost has never directly been addressed during the five-year review, yet review findings are replete with references to the cost implications of a low production of graduates, low sophomore enrollment levels, cost savings to be derived from program consolidations, and so forth. Thus cost, like quality, is a closeted criterion which everyone assumes to be one of the foundation stones upon which the review structure is built, but which has yet to be made explicit. If cost is to be considered in the five-year review, as it has in numerous reports of findings and as it must be if the expectations the Regents themselves have of the five-year review are to be met, then this criterion should be explicitly embraced as such, rather than being pulled out of the hat during site visits. Everyone seems to know it is in there anyway.
Program cost is essentially the flip-side of the productivity ratio discussed above. The question of productivity asks how many units of output does one obtain per unit of input. The question of cost reverses the question to how many units of input are necessary per unit of output. One would expect the participants in this study, therefore, to assess the pertinence of the information collected relative to cost the same way as they assessed information relative to productivity, and indeed they did with few minor variations.

Regents' staff conducting the review have never directly related program cost to the placement of graduates in jobs, deriving a cost per placement as has been attempted within the management information system established by the Comprehensive Employment and Training Act (CETA) administration of the Department of Labor. They have, however, raised issues relating to cost on the basis of enrollment reports and the report of degrees awarded.

Study participants agreed fairly strongly (3.27) that enrollment reports are pertinent to the question of cost, but agreed only by the barest of margins (2.54) that the report of degrees awarded is also pertinent to the cost of a program, as is reported in Table 7. The assessment of the pertinence of enrollment information to cost rendered by the study participants as a whole was nearly identical to the rating given its use in considerations of productivity. The specific weaknesses of the information attending the use of current enrollment data for productivity assessment were also mentioned as regards cost—notably, the absence of any specific cost information in the form of financial summaries and the use of student majors rather than credit hours generated by course enrollments. In addition to these weaknesses, however, institutional personnel identified another critical weakness for which they sought remedy. Program costing practices are widely disparate among those institutions which actually derive program costs in their budget-building processes. In some institutions these practices are primitive; in others, they are non-existent. One community
Table 7  
ASSESSMENT OF INFORMATION SELECTED TO CRITERION OF COST

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<th>Item of Information</th>
<th>Assessment of Pertinence *</th>
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<tr>
<td>Enrollment Report</td>
<td>3.20</td>
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<tr>
<td>Degrees Awarded</td>
<td>2.40</td>
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</tbody>
</table>

* 4.00 - 2.51 = Information is Pertinent  
1.00 - 2.50 = Information is not Pertinent
college chief instructional officer commented that there is a real need in Ohio for a uniform method of determining program cost before programs can ever be compared whether within or among institutions. Another wrote despairingly that his attempts to derive actual costs of programs had met with failure, and called for assistance from the Regents in devising a uniform method.

The Regents' own information system appears to have contributed to this problem, but fortunately, relatively minor modifications to that system could resolve the problem to the mutual benefit of both the institutions and the Regents' program review process. In the process of preparing the biennial budget for higher education, the Regents' staff conduct a study of the costs of offering various types of programs. The study is called a resource analysis, and institutional information systems are designed in such a way as to be compatible with the information needs of the resource analysis. Thus the basic computer program necessary for collecting information regarding program costs already exists, with a capacity to collect information regarding the major components of the costs of instructional programs as currently defined by the Regents and the National Association of College and University Business Officers (NACUBO). These components are departmental instruction and research (primarily including faculty compensation), academic support (including costs of maintaining libraries, media centers, and course curriculum, and materials development), institutional support (the costs of maintaining central administration and administrative support services), student services (admissions, registration, and records, student advisement and counseling, and other student services), and plant operation and maintenance. The Regents' system of collecting such cost information has worked well for the purposes for which it was originally designed—budget-building on a systemwide basis. Unfortunately, it has not yielded information necessary for specific program review because its definition of "program" has been too gross. Under the current system, all the various...
technical programs (over 160 discrete technologies) are fit into the five taxonomic categories of business, engineering, health, agricultural and natural resource sciences, and public service technologies, and cost information for all the programs in those categories are reported in the aggregate. Thus it is possible to know the cost of offering "business programs," but not possible under the current system to know the cost of offering data processing technology, accounting technology, or secretarial science technology. Such information is vital if program review is to address the criterion of program cost effectively. A relatively minor reprogramming of the current information system, which would add two digits to the general program code for specific program designations, would yield the information necessary to serve both the interest of resource analysis and program review. Only by doing so can the Regents' staff and the institutions sensibly relate resource inputs to the program outputs which study participants regarded as most pertinent to both criteria of productivity and cost.

Study participants were even more strongly skeptical of the pertinence of the degrees awarded report to the issue of cost than its pertinence to any other criterion. The consensus rating of 2.48 shows that while opinion was nearly evenly divided on the pertinence of this information to program cost, disagreement was significant enough to suggest that this information not be used in the future in the assessment of program cost.

**Summary: Findings Relative to the Scope and Selection of Information for the Assessment of the Cost Criterion**

The findings of this study indicate that of the two items of information which have been used in the past to assess program cost, only the report of enrollments is pertinent to this criterion. Furthermore, the scope of the information which has heretofore been collected with regard to this criterion has been judged inadequate by the participants in this study. Study participants recommended that the scope of the
information requested be expanded to include specific cost data, even though doing so will probably require minor modifications to the Uniform Information System currently used by the Ohio Board of Regents in its resource analysis. Finally, study participants recommend the definition of "enrollments" be changed from "number of student majors" to "student credit hours generated by enrollment in courses comprising a program." The overall rating given by study participants to the pertinence of the information currently used in the assessment of program cost was 2.88.

**Summary: Findings Relative to Information Scope and Selection**

The judgments of the participants of this study with regard to the pertinence of the information which has been used by the staff of the Ohio Board of Regents in their conduct of the five-year review are summarized in Table 8. Based upon aggregate ratings of all eight items of information as variously used in the assessment of programs on all five criteria, the review was rated at 2.99, indicating solid agreement that in general, the information selected for the review is pertinent to the criteria used during the review. The review's rating for information scope and selection is, however, considerably below its ratings on the two other utility standards discussed thus far.

This lower rating is reflective of significant concerns regarding both scope and selection of information. The absence of specific financial information must be considered a significant deficiency in the scope of information used to consider issues relating to the criteria of efficiency/productivity and cost. Relatively minor modifications of the Regents' Uniform Information System would remedy this deficiency. Respondents also suggested that enrollment reports could be improved by changing the definition of enrollments from student majors to student credit hours generated by enrollment in courses comprising a program, particularly as enrollments are used as an output measure or unit of service. Finally, the advisory committee report, although widely acknowledged as pertinent to the issue of quality, was criticized as being of insufficient scope. Some means other than simply a report of
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<th>Item of Information</th>
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the names and addresses of advisory committee members, and the number of meetings held during the previous year, should be found to assess the actual contributions advisory committees are asked to make to the quality of technical associate degree programs. Interviews during site visits, requests for the minutes of meetings, or mailed questionnaires could improve the scope of this information.

With regard to the selection of information, this study revealed a significant degree of discomfort with the report of degrees awarded for any purpose other than the assessment of continued need for a program or the impact of possible program duplication, and even then only if used in conjunction with other data. The discomfort over the use of the report of degrees awarded in evaluating continued need reveals a possible value conflict between the Regents and institutional personnel which will be discussed further in the subsequent evaluation of valutational interpretation. The extent of disagreement, however, concerning the pertinence of the number of degrees awarded to the criteria of productivity/efficiency and cost is sufficiently great to support a recommendation that the use of this report for these purposes be discontinued, despite the fact that doing so strips these criteria of all but one indicator—a less than ideal but acceptable situation.

A final major finding of this study is its demonstration of general acceptance of the five criteria of duplication, need, quality, efficiency, and cost as appropriate issues of concern in the five-year review. Only one individual respondent, who reported his belief that competition is so desirable that duplication should not be regarded a problem, objected to any criterion itself. Clearly the expectations of the audiences are such, however, that the criteria of quality and cost should be made more explicit and approached more directly during the five-year review, appropriately augmented with specific faculty or other expertise in the assessment of quality and with financial data in the assessment of cost.
Valuational Interpretation

The fourth standard established by the Joint Committee on Standards to enhance the usefulness of educational evaluations requires that the perspectives, procedures, and rationale used to interpret the findings of the evaluation be carefully described so that the bases for value judgments are clear (JCS, 1981, p. 32). The basis of the value judgments made during the five-year review are the standards contained in the Ohio Board of Regents' Rule 3333-1-04 and the Operating Manual for Two-Year Campus Programs, Section 700.2. There are 12 distinct standards enunciated in these two documents which are used during the five-year review and which formulate the value set upon which findings are interpreted. Of interest to this study, therefore, are three questions which relate to the clarity of the valuational interpretations of the findings of the five-year review. To meet this JCS standard satisfactorily, the procedures employed in the conduct of the five-year review must be clear, and the standards forming the value set must be clear. The third issue to be investigated is the extent to which the value set explicitly expressed by the primary audience for the findings of the five-year review—the Board of Regents, are shared by the secondary audience for those findings, the institutions themselves. Any serious value conflict would have to be seen as impairing the potential usefulness of the five-year review to one audience or the other.

Clarity of Procedures

One subcomponent of the standard pertaining to valuational interpretation requires that the procedures used to interpret the findings of the evaluation be carefully described so that the basis for value judgments are clear. In November, 1979, the Board of Regents adopted an Operating Manual for Two-Year Campus Programs, one section of which is devoted to a description of the procedures to be followed in the five-year review (OBR, 1980b). Participants in this study were asked to assess the clarity of those procedures. Their response is reported in Table 9.
Table 9

ASSESSMENT OF CLARITY
OF PROCEDURES USED IN
THE FIVE-YEAR REVIEW

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<td>TC CEO</td>
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</tr>
<tr>
<td>UA CEO</td>
<td>4.00</td>
</tr>
<tr>
<td>ALL CEO</td>
<td>3.30</td>
</tr>
<tr>
<td>REGENTS</td>
<td>2.80</td>
</tr>
<tr>
<td>CONSENSUS</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Clear</th>
<th>Unclear</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Participants as a whole agreed that the five-year review meets the first subcomponent of this standard, and fairly strongly so. If the researcher had confined this item only to those directly participating in the review and had selected, therefore, the six "consumer" Regents' staff, response on this item would have yielded the marginally higher result of 3.33. As one would expect, those participant groups most involved in the processes of the five-year review—the chief instructional officers—were most knowledgeable of the procedures employed in it. Only three of the 35 participants responding to this item indicated that these procedures were unclear to them, one of whom (a chief executive officer) explained that as a president, he really is not attentive to procedural matters. The five-year review meets the first requirement of the JCS standard of valuational interpretation. Its procedures are clear.
Clarity of the Standards

The second subcomponent of the valuational interpretation standard pertains to the clarity of the standards employed in the five-year review. As this expresses the value set upon which judgments are made, participants were asked to assess the extent to which the standards as promulgated by the Regents are clear and well understood. Respondents' judgments are reported in Table 10.

Study participants either strongly agreed or fairly strongly agreed that ten of the Regents' standards are clear and well understood. Participants agreed that the remaining two standards are clear, but one standard generated dissent sufficient to justify further comment.

Regents Rule 3333-1-04 requires technical programs to provide students with a minimum of 21 quarter credit hours in studies which provide the theoretical and/or scientific underpinnings of the technology being studied. Seven of the 37 respondents judged this standard unclear, noting that courses which are technical in one program, are considered basic in another, particularly in the business technologies. These respondents characterized this standard as the least well understood of the standards, a belief confirmed by the findings of this study. The findings are of insufficient strength to justify a recommendation that this standard be further clarified, but in view of the comments drawn by this item, the Regents' staff may further improve the level of understanding of this standard by clarifying further its definition of "basic/related studies." Based upon these findings as a whole, however, the five-year review must be considered as having more than adequately met the second subcomponent of the JCS standard regarding valuational interpretation. Its standards are clear and well understood.

Valuational Consonance

It should be noted at the outset that valuational consonance is not specifically required under the JCS standard for valuational interpretation. All that is necessary to meet this standard is that the perspectives, procedures, and rationale used to interpret the findings
Table 10
ASSESSMENT OF THE CLARITY OF THE STANDARDS
USED IN THE CONDUCT OF THE FIVE-YEAR REVIEW

<table>
<thead>
<tr>
<th>Standard Regarding</th>
<th>Assessment of Clarity *</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OC</td>
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<tr>
<td>Curriculum:</td>
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</tr>
<tr>
<td>Basic Component</td>
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<tr>
<td>General Studies</td>
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<tr>
<td>Minimum/Maximum Length</td>
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</tr>
<tr>
<td>Technical Electives</td>
<td>3.20</td>
</tr>
<tr>
<td>Advisory Committees</td>
<td>3.60</td>
</tr>
<tr>
<td>Freshman Enrollment</td>
<td>3.20</td>
</tr>
<tr>
<td>Sophomore Enrollment</td>
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</tr>
<tr>
<td>Degrees Awarded</td>
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</tr>
<tr>
<td>Job Placement</td>
<td>3.60</td>
</tr>
<tr>
<td>Faculty Leadership</td>
<td>3.20</td>
</tr>
<tr>
<td>Faculty Qualifications</td>
<td>3.40</td>
</tr>
</tbody>
</table>

* Clear | Unclear
| 4.0 | 2.5 | 1.0
of the evaluation be carefully described so that the bases for value judgments are clear. Those of the five-year review evidently have been. But because of the nature of the Board of Regents itself, the traditions of higher education, and the characteristics of academic decision making, this researcher believed it even more important to ascertain the extent to which the value set represented by the Regents' standards shared, or at least deemed appropriate by professional consensus.

Therefore, in addition to asking respondents to comment on the clarity of the standards, this study asked them to indicate the extent to which they agreed that each standard is appropriate to technical associate degree programs. The assessment of appropriateness of these standards by institutional respondents is reported in Table 11.

Institutional respondents as a whole either agreed or fairly strongly agreed that eight of the 12 standards used during the five-year review are indeed appropriate for technical associate degree programs. The appropriateness of three of the remaining four standards must be viewed as dubious from the institutional perspective in view of the weakness of the agreement that they are appropriate. Only one of the 12 standards—the standard expectation of eight graduates annually from each technical associate degree program—was deemed inappropriate.

Interestingly, chief instructional officers as a group accepted all 12 standards as appropriate, and registered much stronger endorsements of ten of the standards than those of the chief executive officers. The four standards generating the weakest agreement of the chief instructional officer, however, were also those which the chief executive officers mean scores identified as either dubious or inappropriate.

Before discussing the four standards identified as suspect by the participants as a whole, another issue pertinent to valuational consonance should be investigated. An assessment of the extent of valuational consonance in the five-year review must go beyond that which exists between the institutions and the Board of Regents. It may also be important, given the nature of Ohio's system of two-year campuses, to assess the extent of valuational consonance among the three types of
Table 11
ASSESSMENT OF THE APPROPRIATENESS OF THE STANDARDS
USED IN THE CONDUCT OF THE FIVE-YEAR REVIEW

<table>
<thead>
<tr>
<th>Standard Regarding</th>
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<td>Faculty Qualifications</td>
<td>2.40</td>
</tr>
</tbody>
</table>

Appropriate | Inappropriate
4.0          | 2.5          | 1.0          |
institutions comprising this system. As noted and provided for in Chapter III, Ohio's system of two-year colleges includes autonomously governed community colleges and technical colleges, and an approximately equal number of university branch campuses, administratively and academically governed by universities. While each of these three types of institutions is responsible for delivering technical education to the citizens of the area it serves, the value sets which motivate each of the three have long been assumed to be quite different. Most suspect with regard to the extent to which the values underlying technical education are shared, have been the university affiliates. If this supposition were correct, one would have expected to find significant disagreement between the university affiliates and the other two, and more pronounced disagreement or weaker agreement regarding the standards of the Regents. In short, one would have expected significant valuational dissonance. The findings presented in Table 12 demonstrate that this is simply not the case. There appears to be no significant valuational dissonance either between university affiliated respondents and the respondents of autonomous institutions, or between the university affiliates and the Regents' standards other than those commonly identified as dubious or unacceptable.

Perhaps predictably, university affiliates were strongest of the three types of institutions in their support of the standard requiring a minimum of 21 quarter credit hours in both basic and general studies in technical associate degree programs. They were also strongest of the three, however, in their support of the 45 credit hour minimum requirement for technical studies. Of the twelve Regents' standards, the four which most clearly represent the enshrinement of the values of technical education (as opposed to those reflective of thrift, efficiency, and excellence) are the standards regarding the technical component of the curriculum, the provision of technical electives, the utilization of advisory committees, and graduate job placement. As previously indicated, university affiliates expressed stronger agreement with one of these standards (technical component) than the
Table 12
PARTICIPANT ASSESSMENT THAT STANDARDS USED IN THE FIVE-YEAR REVIEW ARE APPROPRIATE, BY INSTITUTIONAL AFFILIATION

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<td>3.03</td>
</tr>
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<tbody>
<tr>
<td>8</td>
<td>13</td>
<td>10</td>
<td>31</td>
<td></td>
</tr>
</tbody>
</table>

### Appropriate | Inappropriate
---|---|---|
4.0 | 2.5 | 1.0
respondents of either of the autonomous institutions. They were more strongly in support of the standards for the utilization of advisory committees and the provision of technical electives than were the technical college respondents, and they more strongly supported the placement standard than did community college respondents. These findings indicate that the intimation that the university affiliates do not share the values of technical education is simply not the case.

Finally, there appears to be less, not more, valuational dissonance between the university affiliates and the Regents than between the autonomous institutions. University affiliated respondents indicated stronger agreement with the appropriateness of none of the standards than did the participants as a whole. With regard to the appropriateness of the three remaining standards, they agreed to the same extent.

That there is such a degree of valuational consonance among the institutions and between the institutions and the Regents is indeed fortunate. Nothing in academia can be as interminable as a debate on first principles by individuals with differing perspectives. The criteria for the review appear to be mutually agreed upon. The indicators of those criteria, with several suggested changes, appear to be acceptable. Eight of the 12 standards of performance on those indicators appear to have been accepted. Attention must turn to the four standards, however, on which there is less than substantial agreement.

Three of the standards used during the five-year review received consensus mean scores in a range indicating dubious appropriateness (2.51 - 2.75). These three attracted dissent sufficient to justify detailed discussion. One pertains to the Regents' standards relative to faculty qualifications. The other two relate to enrollment standards. A fourth standard received a consensus mean score of 2.42, indicating disagreement that the standard relating to the number of degrees awarded is appropriate to technical associate degree programs. The findings regarding these four standards will be discussed in that order.
Faculty Qualifications

In the findings regarding information scope and selection, study participants expressed fairly strong agreement that the qualifications of technical faculty members are pertinent—indeed, the most pertinent indicator—to program quality. When asked, however, to indicate the extent to which they agreed that the current standard used by the Regents relative to faculty qualifications is appropriate to technical associate degree programs, study participants agreed only weakly (consensus mean score of 2.61). The standard was judged appropriate by only the barest majority of the study participants. The remaining 49 percent of the study participants expressed misgivings.

The standard as it appears in Regents Rule 3333-1-04 states that each technical faculty member should have a minimum of a baccalaureate degree, preferably a master's degree, and should possess a minimum of five years of experience other than teaching in the technology for which he is responsible, or in a closely related field. Both components of these qualifications attracted significant dissent.

One respondent judged the standard satisfactory as far as it goes, but suggested it be tightened somewhat by the additional explicit provision that the educational experience be pertinent to the technology the instructor is teaching. Another deemed the preference for the master's degree unnecessary, suggesting primary emphasis be placed upon the experiential requirement so long as that experience is augmented by appropriately selected courses in education. Most comments, however, focused upon the exception which must be made to the baccalaureate degree requirement in the less theoretical, more highly skills oriented occupational programs such as welding, automotive mechanics, diesel technology and machining. Respondents noted that baccalaureate programs—not to mention master's programs—are not available in such programs, placing exclusive emphasis upon evidence of skill mastery as reflected by work experience.

The work experience requirement also drew criticism, however, as being excessive. One respondent commented that the number of years of
work experience which should be considered as the minimum necessary prior to teaching technical education depends upon the specific technology itself. He doubted most business programs should require any more than three years, but supported the five-year requirement for instructors in the health technologies. Most respondents commenting on this item, however, suggested that the number of years of work experience considered the minimum necessary be reduced from five to three.

Four other respondents emphasized the necessity of flexibility in applying this standard, indicating acceptability only insofar as exceptions to one or the other of the above requirements are permitted. One of these respondents pointed out that the use of the word "should" rather than "shall" classifies the statement as a guideline rather a standard, and to the extent it is a guideline it is appropriate for use during the five-year review of technical associate degree programs.

Based upon these findings, the Regents should reexamine this standard in consultation with institutional personnel with an eye toward achieving greater valuational consonance. The use of faculty qualifications as the primary indicator of program quality strongly suggests that a greater degree of valuational consonance be achieved on the minimum expectations of faculty qualification than apparently exists.

**Enrollment Standards**

Even greater valuational dissonance attends the enrollment standards used during the five-year review as minimum indicators of program viability. According to the *Operating Manual for Two-Year Campus Programs* (700.2) programs should enroll a minimum of 15 freshman students and 12 sophomore students, on the average over the five-year period subject to the review. These standards, would suggest that 15 freshmen and 12 sophomores are minimally indicative of continued need for a program, the minimum necessary to deliver a quality program, minimally indicative of acceptable efficiency and productivity, and the minimum number required to generate sufficient income to the institution to offset the costs of offering it. The freshman enrollment standard was
judged appropriate again by the barest of majorities (51%); the sophomore enrollment standard was rejected as inappropriate by 55 percent of the institutional participants in this study, although the extent of agreement and disagreement yielded a consensus mean score indicating a nearly even division of opinion (2.51).

Even of those agreeing that these enrollment standards are appropriate, several cautioned that they must be applied flexibly and should be clarified definitionally, the same definitional weaknesses discussed earlier in the findings regarding information scope and selection were reiterated with regard to the standards. Respondents again suggested that the definition of enrollments be expanded beyond "student majors," and one community college chief executive officer suggested that a truer reading of enrollment would result from examining annual enrollments in idiosyncratic courses unique to the specific technical program. Such an approach would require the identification of at least one first-year and one second-year course which is exclusive to a particular technology and allowing fall term enrollments in those courses to be the operational definition of freshman and sophomore enrollments, rather than "declared majors."

Previous findings have already suggested that respondents regard as inappropriate the use of the enrollment report in the assessment of quality. Other objections to the enrollment standard also seemed to turn on the criteria for which the standard is used.

Technical college personnel reiterated their belief that the need for a program should be assessed exclusively on the basis of labor market demand, irrespective of enrollments. In the view of many of these participants, a program demanded by local employers to meet critical labor shortages should be offered even if fewer than 15 freshmen and 12 sophomores enroll in the program, so long as the institution is able to mitigate the fiscal impact of offering programs of low enrollment with programs which enroll more students than are required to offset costs. In this view, community needs may sometimes require "robbing Peter to pay Paul," and the need for a program has nothing to do with student demand.
Respondents conceded, however, that enrollments do have quite a bit to do with program efficiency and cost, but program costs (and hence program efficiency) have nothing to do with the number of credit hours a student has accumulated. According to a significant number of respondents, cost and efficiency ratios should be based upon the student credit hours generated by enrollments in all the courses comprising a program. Whether a student is a major or a non-major, full-time or part-time, a freshman or a sophomore, are irrelevant to the cost or the efficiency of a program. The number of students required to justify the costs of a program, moreover, in the judgment of institutional respondents, depends upon its mode of delivery and the level at which it is funded. After the initial expenses of course development have been incurred, it costs less to deliver an individualized program than one which is delivered in a more traditional mode, hence the program can be economically delivered to fewer students than 15 freshmen and 12 sophomores. Other respondents, noting that the Regents' three technical subsidy models recognized variations in student:faculty ratios common to various types of technical programs, suggested that minimum enrollment expectations be indexed to the subsidy model at which the program has been placed, inasmuch as these subsidy models are the primary determinant of the income generated by a program.

The findings of this study suggest that the enrollment standards used during the five-year review be reexamined. They should be reassessed with regard to the extent to which 15 freshmen and 12 sophomores are really necessary to constitute adequate student demand for a program from the Regents' point of view. Consideration should be given the suggestion that the enrollment standards, when used in the assessment of cost and efficiency, be expressed in terms of student credit hours generated by enrollments in courses comprising the program, dropping the freshman-sophomore distinction. Finally, the feasibility of setting different minimum enrollment expectations for different types of programs should be investigated. If such changes would either adequately or more adequately express the Regents' expectations with
regard to need, cost, and efficiency, stronger valuational consonance could be achieved. There is currently dissonance sufficient to justify a reexamination of these enrollment standards.

Number of Graduates

The final standard regarding which this study revealed significant valuational dissonance is the standard pertaining to the minimum number of degrees awarded annually. The standard calls for a minimum of eight graduates annually after the fourth year of a program's operation. This standard must be taken as reflecting the Regents' minimum expectations of an adequate response to the community's need for a program, the minimum number of graduates below which program duplication is not warranted, the number minimally indicative of efficiency, and the minimum level of output which would justify the costs of a program.

Previous findings have already documented the considerably widespread (though far from universal) belief of institutional personnel that the number of degrees awarded is not information which is pertinent to issues of cost and efficiency. In large measure, the consensus mean score given this item (2.42, indicating disagreement that this standard is appropriate) may be due to its use as the unit of output used in the assessment of cost and productivity. Discussion of these and other prior findings has already suggested that student credit hours are deemed more pertinent to these criteria and may sufficiently express the values of the Regents with regard to these criteria. The use of the standard as minimally indicative of need, however, remains an issue.

The debate is a lively one. Regents' staff point first to the representations made by institutions to the Regents during the process of program approval. At the risk of over-simplification, the following opening salvo in this debate comes from the Regents. In approving programs, Regents are persuaded that the community's needs for ABC technicians are critical. Regents are, therefore, asked to approve a two-year associate degree program in ABC technology, which would, by that authorization, make this program eligible for state subsidy. Costs
are estimated at $65,000 annually. The program is approved, faculty are hired, library materials purchased, equipment is purchased, rooms and laboratories are obligated, students enroll. Two years and $130,000 later, five associate degree graduates are produced in response to this critical local shortage of ABC technicians at an opening cost of $26,000 per graduate. One newspaper ad placed in every major metropolitan newspaper in the country would surely attract more than five ABC technicians for considerably less cost and effort. Thus the Regents' staff set eight graduates as reflecting the level of response to local need minimally justifying an associate degree program. Millet (1978) recommended a minimum of ten, and it should be noted that 12 of the institutional participants in this study (38.7%) agreed or strongly agreed that the eight graduates standard is appropriate.

The remainder, however, argue that the number of degree graduates does not accurately represent the extent to which a program has responded to the need for it. Indeed, a low number of graduates may well be further indicative of the massive need for trained people who are hired away from their degree programs as soon as they achieve a minimal level of technical competence. Some students enroll in programs without ever intending to complete the associate degree, and take only those selected courses which will make them employable or upgrade them in their present jobs. This argument was confirmed (though its impact mitigated) by recent findings that 18.0% of all students enrolling in Ohio's two-year colleges intend to achieve their educational goal by taking selected courses (Harbaugh, 1980). (It should also be noted that the same study indicated that 65.8% of them intend to do so by completing an associate degree.)

Resolving this debate is beyond the scope of this study. This study does suggest, however, that a significant degree of valuational dissonance exists with regard to the use of an eight graduates standard in assessing the continued viability of associate degree programs. Institutional participants in this study did not regard this standard appropriate to associate degree programs, although the extent of their
disagreement was relatively weak. Both the Regents and the institutions would profit from a full discussion of the issues relating to minimum numbers of degrees awarded.

Summary: Valuational Interpretation

If the requirements promulgated by the Joint Committee on Standards for Evaluations with regard to valuational interpretation are strictly construed, the five-year review earns high marks indeed. The standard itself requires that the procedures, perspectives, and rationale used to interpret findings be carefully described so that the basis for value judgments are clear. Participants in this study fairly strongly agreed that the procedures employed in the five-year review are clear, and fairly strongly agreed that the perspectives and rationale used to interpret the findings, as represented by the Regents' standards, are clear and well understood.

It is not enough, however, merely to report that the basis for valuational interpretation is clear and well understood. If the participant institutions are regarded as an audience for the findings of the five-year review and not merely its objects, the usefulness of the findings of the review depends largely upon the extent to which the valuational bases for interpretation are shared by the two primary audiences. Despite the emphasis given to the valuational dissonance which was discovered by this study, the findings show that to a great extent, the review has operated on the basis of a value set shared by both the Regents and the institutions.

There is evidence of significant valuational dissonance with regard to only four of the 12 standards used during the five-year review. An opportunity exists, however, for the strengthening of the usefulness of the five-year review by addressing the dissonance on these four standards. Accommodation of those who object to the standards regarding faculty qualifications, enrollments, and degrees awarded may not be possible without sacrificing or at least compromising fundamental values of the primary audience, the Board of Regents. Findings suggest, however, that alternative statements of at least three of the four
questionable standards are possible without any diminution of the values they are intended to express. The fourth standard pertaining to the number of degrees may or may not be problematic, but at very least an opportunity should be seized for mutual clarification of the values underlying this expectation from both perspectives.

These findings notwithstanding, the performance of the five-year review with regard to valuational interpretation—even with the author's additional component of valuational consonance among audiences—must be rated at a more than satisfactory 3.18 as the consensus judgment of study participants.

**Report Clarity**

The first four utility standards of the Joint Committee lay the foundations for the evaluation. They are necessary antecedents of a successful evaluation. The last four utility standards focus attention upon the results of the evaluation. Attributes of satisfactory process are organized under the standards for feasibility, propriety of conduct, and accuracy which will be discussed in successive chapters. Setting process attributes aside for a moment, this investigation turns to the standards intended to enhance the usefulness of the results of the evaluation—report clarity, report dissemination, report timeliness, and evaluation impact.

If an evaluation is to be useful, the report of the evaluation should describe the object being evaluated and its context, and the purposes, procedures and findings of the evaluation. Doing so assures that audiences will readily understand what was done, why it was done, what information was obtained, what conclusions were drawn, and what recommendations were made (JCS, 1981, p. 37).

In investigating the extent to which the five-year review meets this standard, the author first examined the various final reports of the five-year review and the Regents' rule authorizing the review and concluded that there could be no doubt that the objects of the five-year review and their context are satisfactorily described. The objects of the five-year review are clearly identified in both Rule 3333-1-04(J)
and the reports as the technical associate degree programs of state-assisted institutions and the specific participant institutions (context) are fully identified in the reports (OBR, "Final Report . . .", 1981). Study participants were, therefore, asked only to assess the extent to which they agreed that the final report of the five-year review has been clear with regard to the review's procedures, rationale, findings, and recommendations. Their assessments are reported in Table 13.

Consensus mean scores resulting from participants' responses indicate fairly strong agreement that the final report of the five-year review has been clear with regard to the review's rationale, procedures, and findings. Study participants agreed that the review's recommendations have been clear. Responses were undifferentiated by participant group although university affiliated personnel tended to indicate stronger agreement that the report has been clear. The review's rating with regard to the standard of review clarity, based upon the aggregate judgment of all study participants on all four topics is a fairly strong 3.27.

Report Dissemination

The clarity of a report, however, can be as irrelevant as last year's snowfall if the report is not disseminated to clients and other right-to-know audiences so that they can assess and use the findings. Failure to distribute the report of findings to appropriate audiences is seen by the Joint Committee as impairing its usefulness (JCS, 1981, p. 40).

Currently, the final report of the five-year review is distributed to the members of the Ohio Board of Regents, the Chancellor, Vice-Chancellors, and directors comprising the Regents' first and second administrative echelons, the chief administrative officer of each participating two-year college and branch campus, and the provost of the university in the latter case. Study participants were asked to indicate the extent to which they agreed that this distribution is appropriate. Their responses are reported in Table 14.
Table 13
ASSESSMENT OF THE CLARITY OF THE
FINAL REPORT OF THE FIVE-YEAR REVIEW

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<td>3.00</td>
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</thead>
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<tr>
<td>4.0</td>
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</table>
Table 14

ASSESSMENT OF APPROPRIATENESS
OF DISTRIBUTION OF FINAL REPORT
OF THE FIVE-YEAR REVIEW

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Assessment of Appropriateness</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
<tr>
<td>TC CIO</td>
<td>3.00</td>
</tr>
<tr>
<td>UA CIO</td>
<td>3.71</td>
</tr>
<tr>
<td>ALL CIO</td>
<td>3.24</td>
</tr>
<tr>
<td>CC CEO</td>
<td>3.00</td>
</tr>
<tr>
<td>TC CEO</td>
<td>3.00</td>
</tr>
<tr>
<td>UA CEO</td>
<td>2.00</td>
</tr>
<tr>
<td>ALL CEO</td>
<td>2.66</td>
</tr>
<tr>
<td>REGENTS</td>
<td>2.83</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>3.03</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Appropriate</th>
<th>Inappropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
</tr>
</tbody>
</table>

The aggregate mean score given by study participants indicates solid agreement that the current distribution is appropriate, but six participants who disagreed, and nine others who agreed, suggested that the report's dissemination be expanded or contracted, although to varying degrees.

Three institutional participants questioned the need to provide a copy of the report to each Regent. One maintained that inasmuch as the five-year review is a management tool, its report should be retained at the management level. In this respondent's view, an oral report and an executive summary should suffice. Two other participants concurred, though for less theoretical reasons, expressing their belief that the bulk of information presenting the results of the review is too extensive for Board members to absorb. As with other reports to the Board, however, the final decision on the scope of the report given to Board members is the Chancellor's, and this study's findings in this regard are insufficient for his use in making such a decision.
Eight participants identified a total of eight external audiences which they believed should receive either the full report of the findings or a summary of it. External recipients identified by at least one participant were the North Central Association, the State Division of Vocational Education and its State Advisory Council, the Office of Budget and Management and the Legislative Budget Office, and the Chairmen of the House and Senate Education Committees of the Ohio General Assembly. One participant expressed his belief that these public officials should be better informed that program review is occurring within the two-year campuses and providing them with the report would achieve this end. The same Regents' staff participant suggested the report be sent to the higher education agencies of other states. Two participants suggested that summaries of findings be provided to the legislators from the districts served by participating institutions, and two participants suggested the Regents provide summaries to the local press in the form of a press release.

Other study participants identified institutional personnel to whom the report should be distributed but is not. Several chief instructional officers noted the irony of this study's having asked the chief academic officers to evaluate the five-year review while not having been included as specific recipients of the report. University affiliated personnel expressed the belief that the report should be provided to their presidents, as well as their provosts, and one of these respondents suggested that the report be provided to all faculty members participating in the review. A Regents' staff participant suggested the report be transmitted by the Chairman of the Board of Regents to the chairmen of the boards of trustees of each participating institution as a means of heightening the awareness of the latter of the processes of program review.

Other audiences internal to the system identified as right-to-know audiences to whom final reports should be disseminated were all other institutions in the system or in the participating institutions' region.
This study found, therefore, that the current distribution of the final report of the five-year review is appropriate, but consideration should be given to expanding this distribution to include both internal and external audiences. The findings themselves do not support inclusion of any one of the specific audiences named above by between one and three study participants, but they do suggest that further discussion of including these persons and entities as recipients of the final report of the five-year review is warranted.

Report Timeliness

The seventh utility standard for evaluations of the Joint Committee on Standards states that the release of reports should be timely so that audiences can best use the reported information (JCS, 1981, p. 44). The model time line used for planning purposes for the various phases of each year's five-year review is displayed in Figure 3. The focus of this standard is upon the sixth phase of the review process, scheduled for planning purposes to occur in May.

As noted in Chapter II, however, actual release of the final reports has been somewhat erratic. Reports have been issued in April, June, September, and even as late as March of the following year. Study participants were, therefore, asked to indicate the extent to which they agreed that the reports of the findings of the five-year review have been released at such a time as to make the findings useful. Responses are reported in Table 15.

Despite the frequent departures from the model's schedule, study participants indicated solid agreement in the aggregate that the report of the findings of the review have been released at such a time as to make the findings useful. Happily for the review, those who one must assume have the greatest use for these findings, the chief instructional officers, indicated the strongest agreement. What the rating procedure conceals, however, is that only four study participants disagreed, two of whom disagreed based upon a belief that the usefulness of the review is achieved long prior to the release of the report. In their view, the
Figure 3: Planning Model for the Successive Phases of the Five-Year Review
usefulness of the review is achieved in the second through fifth phases; the final report merely reports a summary of what has already taken place. This belief notwithstanding, one participant commented he would have preferred receiving the final report prior to the September date when it was issued, in that changes recommended could not be implemented until the following academic year. Another suggested that implementation could be improved, given the nature of academic governance, if the report were to be issued no later than April.

There appears to be general satisfaction, however, with the timeliness of the final report of the five-year review. The Regents' personnel should continue to strive to adhere to the model which would produce the report as early in the Spring quarter as possible, but these findings reveal no significant deficiency in the attainment of this standard's expectations.

Table 15
ASSESSMENT OF THE TIMELINESS
OF THE RELEASE OF THE REPORT
OF THE FIVE-YEAR REVIEW

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Assessment of Timeliness</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC CIO</td>
<td>3.40</td>
</tr>
<tr>
<td>TC CIO</td>
<td>3.22</td>
</tr>
<tr>
<td>UA CIO</td>
<td>3.14</td>
</tr>
<tr>
<td>ALL CIO</td>
<td>3.24</td>
</tr>
<tr>
<td>CC CEO</td>
<td>3.00</td>
</tr>
<tr>
<td>TC CEO</td>
<td>2.75</td>
</tr>
<tr>
<td>UA CEO</td>
<td>3.00</td>
</tr>
<tr>
<td>ALL CEO</td>
<td>2.90</td>
</tr>
<tr>
<td>REGENTS</td>
<td>2.75</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3.09</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Timely</th>
<th>Not Timely</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
</tr>
</tbody>
</table>
Evaluation Impact

The Joint Committee's final standard for enhancing the usefulness of evaluations states that "evaluations should be planned and conducted in ways that encourage follow-through by members of the audiences" (JCS, 1981, p. 47). This standard can be easily misconstrued; a full explanation of the standard provided by the committee is justified:

The impact of an evaluation refers to the influence it has on the decisions and actions of members of the audience. A beneficial impact is one that helps educators carry out their responsibilities, and in general, meet the educational needs of their students. The thrust of this standard is that evaluators should help their audiences use the evaluation findings in taking such beneficial actions as improving programs...selecting more cost-beneficial products or approaches; or stopping wasteful, unproductive efforts.

Evaluators must not assume that improvements will occur automatically once the evaluation report is completed. Such improvements must be stimulated and guided...(ibid.)

Study participants were, therefore, asked to indicate the extent to which they agreed there is adequate follow-up of the findings of the five-year review. Institutional assessments are reported in Table 16.

The aggregate mean score given this item by the participants would seem to indicate a satisfactory level of agreement there is sufficient follow-up. These results, however, must be judged invalid. During the interviews, the researcher discovered a deficiency in the phrasing of this question which not only rendered the item an invalid indicator for use in assessing the five-year review on this standard, but also rendered the responses of the chief instructional officers incomparable to those of the chief executive officers. The questionnaire item failed to specify follow-up by whom. During the interviews, the researcher was able to clarify the item by asking respondents to assess follow-up by both institutions and evaluators, but it was not feasible to repair the deficiency in the questionnaire by that time.
Table 16

INSTITUTIONAL ASSESSMENTS OF THE ADEQUACY OF FOLLOW-UP OF THE FINDINGS OF THE FIVE-YEAR REVIEW

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Assessment of Adequacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC    CIO</td>
<td>3.25</td>
</tr>
<tr>
<td>TC    CIO</td>
<td>3.00</td>
</tr>
<tr>
<td>UA    CIO</td>
<td>3.33</td>
</tr>
<tr>
<td>ALL   CIO</td>
<td>3.17</td>
</tr>
<tr>
<td>CC    CEO</td>
<td>2.33</td>
</tr>
<tr>
<td>TC    CEO</td>
<td>2.75</td>
</tr>
<tr>
<td>UA    CEO</td>
<td>2.50</td>
</tr>
<tr>
<td>ALL   CEO</td>
<td>2.55</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>2.96</strong></td>
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<table>
<thead>
<tr>
<th>Adequate</th>
<th>Inadequate</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Based upon interview responses, however, and the number of chief instructional officers reporting that they had no basis for judgment in responding to this item on the questionnaire, there is reason to believe that the true institutional assessment of the adequacy of the follow-up of the findings of the five-year review by the Regents' personnel conducting the review is closer to the chief executive officers' rating than that of the chief instructional officers. The common theme of the interview comments was an absence of any knowledge of follow-up by the Regents' staff, and of the six Regents' staff participants in this study, three responded that they lacked any information on follow-up sufficient to make a judgment, and two others disagreed outright. The Regents' staff member who has been most involved in the five-year review strongly disagreed, stating that "we can and should do more by way of assisting campuses to make recommended changes" (interview notes). If one
disregards the responses of the chief instructional officers as invalid, the rating of the five-year review on the adequacy of follow-up becomes 2.42. In the absence of any described follow-up procedures, and in the absence of any personal knowledge of this researcher of any systematic follow-up of the recommendations of the five-year review, the review must be judged as not meeting this component of the standard relative to evaluation impact.

In view of legislative interest in the impact of program review and the emphasis placed upon impact in the literature pertaining to program review, this study expanded its inquiry into evaluation impact by attempting to assess institutional perceptions of the impact the five-year review has had in the institutions which have participated in the five-year review. While acknowledging a program review process may well have unintended outcomes, this inquiry focused upon the extent to which those outcomes which have been claimed as intended outcomes have been achieved. Six outcomes have been specifically claimed by the Regents' staff conducting the review as intended impacts of the five-year review. These six include:

1) affording the institution an opportunity to prune itself of weak programs, enabling it to reallocate the resources consumed by such programs to other current programs or new areas of need where the potential for success is greater;

2) affording the institution the observations of outsiders able to identify program problems and suggest solutions for amelioration;

3) affording the Regents a tool for assessing the need for additional capital budget requests to replace facilities and equipment which the institution believes to be inadequate;

4) affording the institution an opportunity to revitalize its commitment to the success of a particular program which may have been suffering from a not-so-benign neglect;

5) protecting the institution against a possible and more intrusive review by non-educational state agencies; and
reassuring the public and its representatives that the considerable resources committed to the support of technical education constitute money well spent, enhancing the probability that public confidence and support will continue (OBR, Final Report ..., 1981, pp. 7-9).

Study participants were asked to indicate the extent to which they agreed that these impacts had actually occurred either in anticipation of (pre-emptive institutional review) or as a result of the five-year review.

Internal Reallocation of Resources

Of the six intended impacts, the first is the only one with direct fiscal implications. As reported in Chapter II of this study, much of the enthusiasm generated by the idea of program review among state government officials and state legislators results from expectations of monetary savings to accrue to the state as a result of program review. The literature also cautions against raising such expectations, however, in that such fiscal impacts are difficult if not impossible to calculate, and raising such expectations distorts the basic purpose and destroys the potential success of program review. Considerations of fiscal impact should, therefore, be governed by clear understandings that the basic purpose of program review is the enhancement of program quality and vitality, not to save money; and that capturing all the resources freed by program review at some level above the institutional level destroys crucial institutional incentive to engage in this process (WICHE, 1980).

It should be noted, therefore, at the outset that the current five-year review process makes no claim to generate monetary savings to the State of Ohio. There is an assumption, however, that program eliminations and/or consolidations will result in a freeing of resources to be retained at the institutional level and internally reallocated to the enhancement of the quality of currently offered programs, or to the exploration of new needs and program opportunities showing greater potential for success. Institutional personnel were asked, therefore, to indicate the extent to which they agreed that such reallocations have been made possible either in anticipation of or as a result of the five-year review. Their
responses are reported in Table 17.

The chief instructional officers and the chief executive officers were in fairly close agreement with each other as groups regarding the extent to which the five-year review has made internal reallocation of resources possible for either specified purpose. In the aggregate, study participants only weakly agreed that internal reallocations of resources were made possible for either purpose. Both groups exhibited slightly greater inclination to reallocate any resources which may have been freed to the exploration of new areas of need rather than to the strengthening of currently offered programs, but this difference was too weak to support any conclusions regarding the differential emphasis two-year college administrators place upon quality enhancement as opposed to institutional responsiveness to local needs.

Despite the relatively weak agreement that the five-year review has had significant fiscal impact, this finding is not interpreted as indicating a weakness in the five-year review. Quite to the contrary, in view of the comments of eight of the respondents and in view of several contextual factors, the finding that about half of the respondents have been able to make internal reallocations for each purpose is a stronger showing than might have been expected. The chief executive officer of one of the largest institutions represented in this study noted that the president's attention is rather broadly directed toward general institutional health, and the five-year review process helped him sharpen his focus upon his weaker programs; his institution was able to shelve two programs he believed he may not otherwise have been able to shelve. A technical college chief instructional officer agreed. Unlike specialized program accreditations, which focus only upon one program, or regional accreditation visits, which somewhat broadly view general institutional quality and vitality, the five-year review in this dean's opinion, forces a consideration of all programs offered by an institution and their relative contribution to the achievement of the institution's mission.

The comments of six other respondents, however, suggest that program review has become such an integral part of institutional management
Table 17

INSTITUTIONAL ASSESSMENT OF THE EXTENT TO WHICH PROGRAM REVIEW HAS FREED RESOURCES FOR INTERNAL REALLOCATION

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Reallocation to Current Programs</th>
<th>Reallocation to New Areas of Need</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Agreed</td>
<td>Agreed</td>
</tr>
<tr>
<td>CC CIO (N)</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>TC CIO (N)</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>UA CIO (N)</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>ALL CIO (N) (%)</td>
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<td>38%</td>
</tr>
<tr>
<td>CC CEO (N)</td>
<td>0</td>
<td>2</td>
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<tr>
<td>TC CEO (N)</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>UA CEO (N)</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>ALL CEO (N) (%)</td>
<td>10%</td>
<td>30%</td>
</tr>
<tr>
<td>TOTAL (N) (%)</td>
<td>13%</td>
<td>35%</td>
</tr>
</tbody>
</table>
processes that it is not possible to identify the five-year review as having been responsible for the internal reallocations of resources which result from their own continuous program review and budgeting processes. The five-year review may have stimulated such institutional processes, but this is an outcome which heretofore has not been documentarily articulated as an intended impact of the five-year review and hence not investigated in this study. If these six respondents are added to those indicating that the five-year review has freed resources consumed by weak programs for reallocation to new areas of need or currently offered programs, it would be possible to conclude that at least three-quarters of the participants in this study have realized savings resulting from program review. Inasmuch as this study is confined specifically to the five-year review, however, the aggregate mean score for the two items assessing the fiscal impact of the five-year review is 2.66.

Suggestions for Amelioration or Improvement of Programs

The second intended impact of the five-year review is the affording of institutions of the observations of individuals external to the institution able to identify problems and suggest solutions to them based upon statewide experiences and perspectives. The hope has been expressed that institutions could profit from the perspectives of outsiders, one of whom has had an extensive career in technical education (cf. Utility Standards: Evaluator Credibility). Such an intended impact relates directly to quality enhancement as opposed to program excision. Institutional participants were asked to assess the extent to which the five-year review process has indeed provided them with such useful or helpful suggestions. Their responses are reported in Table 18.

Without comment, study participants nearly unanimously agreed that the five-year review process has provided them with useful or helpful suggestions. Only one study participant (a technical college chief instructional officer) disagreed. Without belaboring the finding, the aggregate mean score given by participants to this item indicates fairly strong agreement that the five-year review has achieved this intended
Table 18

INSTITUTIONAL ASSESSMENT OF THE EXTENT TO WHICH THE FIVE-YEAR REVIEW HAS PROVIDED USEFUL SUGGESTIONS FOR PROGRAM IMPROVEMENT

<table>
<thead>
<tr>
<th>Participant Group</th>
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</thead>
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<td>TC CIO</td>
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</tr>
<tr>
<td>UA CIO</td>
<td>3.43</td>
</tr>
<tr>
<td>ALL CIO</td>
<td>3.29</td>
</tr>
<tr>
<td>CC CEO</td>
<td>3.00</td>
</tr>
<tr>
<td>TC CEO</td>
<td>3.25</td>
</tr>
<tr>
<td>UA CEO</td>
<td>3.66</td>
</tr>
<tr>
<td>ALL CEO</td>
<td>3.30</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3.29</td>
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</tbody>
</table>

<table>
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<th>Disagreed</th>
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<td>4.0</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
</tr>
</tbody>
</table>
impact. To the extent that additional expertise is added to the review process, as the findings regarding evaluator credibility suggests it should, this impact could be further strengthened.

Tool for Assessment of Capital Expenditure Requests

The third explicitly stated intended impact of the five-year review is the provision of a tool to the Regents for the evaluation of institutional requests for capital appropriations to replace buildings and/or equipment believed by the institution to be inadequate. This researcher found no evidence that the five-year review has actually ever been used for this purpose. None of the recommendations to the Board of Regents resulting from the five-year review has ever pertained directly or indirectly to the need for capital expenditures. Indeed, the review collects no documentary evidence regarding either program equipment or the facilities in which programs are housed. Capital budget requests are evaluated biennially by a different office of the Board of Regents in a process separate from the five-year review and under the demands of a schedule not accommodated by the five-year cycle of the review.

This impact must, therefore, be regarded more as a potential impact than an intended one. It has evidently not been attempted, much less achieved. If it is to remain an explicit, intended impact, a purposive effort lacking heretofore must be directed toward achieving it. For a number of reasons, however, achievement of this impact may not be sufficiently compelling to justify the revisions which would be necessary in the five-year review process before it could usefully interdigitate with the biennial capital budget building process, not the least of which would be scheduling. If so, this should be deleted as an intended impact of the five-year review.

Revitalization of Commitment

A fourth intended impact of the five-year review is the revitalization of institutional commitment to a particular program which the institution continues to believe necessary but which may have been

Under the possibility of a recommendation for a program's elimination, an institution has an opportunity to reexamine its priorities and renew its commitment to those programs the college chooses to continue. (As a result) greater effort is exerted to improve the program's chances for success, advisory committees are revitalized, and the renewed commitment endows seemingly moribund programs with new vitality (p. 8).

Institutional participants in this study were asked to indicate the extent to which they agreed this has actually been achieved either in anticipation of or as a result of the five-year review process. Their responses are reported in Table 19.

Table 19

INSTITUTIONAL ASSESSMENT OF THE EXTENT TO WHICH THE FIVE-YEAR REVIEW HAS CONTRIBUTED TO A REVITALIZATION OF COMMITMENT TO A PROGRAM

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Review Has Contributed</th>
<th>Review Has Not Contributed</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC CIO</td>
<td>5</td>
<td>0</td>
<td>3.40</td>
</tr>
<tr>
<td>TC CIO</td>
<td>6</td>
<td>3</td>
<td>2.88</td>
</tr>
<tr>
<td>UA CIO</td>
<td>6</td>
<td>1</td>
<td>3.14</td>
</tr>
<tr>
<td>ALL CIO</td>
<td>17</td>
<td>4</td>
<td>3.08</td>
</tr>
<tr>
<td>%</td>
<td>81%</td>
<td>19%</td>
<td></td>
</tr>
<tr>
<td>CC CEO</td>
<td>2</td>
<td>1</td>
<td>2.66</td>
</tr>
<tr>
<td>TC CEO</td>
<td>1</td>
<td>3</td>
<td>2.25</td>
</tr>
<tr>
<td>UA CEO</td>
<td>1</td>
<td>2</td>
<td>2.66</td>
</tr>
<tr>
<td>ALL CEO</td>
<td>4</td>
<td>6</td>
<td>2.40</td>
</tr>
<tr>
<td>%</td>
<td>40%</td>
<td>60%</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>21</td>
<td>10</td>
<td>2.87</td>
</tr>
<tr>
<td>%</td>
<td>68%</td>
<td>32%</td>
<td></td>
</tr>
</tbody>
</table>
Those study participants most directly involved in instructional program management—the chief instructional officers—had most clearly perceived such an impact having occurred. As a group, chief executive officers disagreed, and again, their explanatory comments attributed such changes as had occurred to institutional review procedures rather than to the five-year review.

Chief executive officers—particularly those affiliated with technical colleges and universities—expressed their belief that the five-year review had served merely to confirm their own perceptions and to justify courses of action they would have chosen anyway. One participant stated he disagreed only because his institution had completed a program review and revision previous to and independent of the five-year review which produced approximately the same results as would have the five-year review had it been conducted at that time. It would appear, therefore, that the chief executive officers credit their chief instructional officers for having instituted program review procedures at their colleges which achieve revitalization of commitment to programs.

Interestingly, several chief instructional officers noted that their success in establishing internal program review was in part due to the existence of the five-year review. One noted that although a number of two-year colleges do conduct their own "in-house" program review, the independent verification function served by the five-year review enhances both the internal and external validity of their findings and confirms their recommendations to their presidents. Another chief instructional officer wrote that it is sometimes difficult to get faculty to take internal program review seriously; the five-year review provides the necessary external stimulus to motivate change.

It is not necessary for present purposes to assess the differential contributions institutional program review and the five-year review make toward achieving this intended impact. Program review is clearly occurring at both levels, with the result of a revitalization of commitment to previously neglected yet important programs. Sixty-eight percent of the participants in this study indicated their belief that the
five-year review had contributed to this result, and the aggregate mean score of 2.87 indicates a satisfactory level of agreement that the five-year review has achieved this intended outcome.

**Public Accountability**

The fifth intended outcome is reassurance of the public and its representatives that the considerable resources devoted to technical education constitute money well spent. This impact speaks directly to the issue of accountability and has already been cited as a primary motivation for the conduct of state-level program review. All study participants (including Regents' staff participants) were asked to indicate the extent to which they agreed this impact has been achieved by the five-year review. Their responses are reported in Table 20.

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Assessment Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC CIO</td>
<td>3.40</td>
</tr>
<tr>
<td>TC CIO</td>
<td>3.25</td>
</tr>
<tr>
<td>UA CIO</td>
<td>3.80</td>
</tr>
<tr>
<td>ALL CIO</td>
<td>3.44</td>
</tr>
<tr>
<td>CC CEO</td>
<td>3.66</td>
</tr>
<tr>
<td>TC CEO</td>
<td>2.75</td>
</tr>
<tr>
<td>UA CEO</td>
<td>1.66</td>
</tr>
<tr>
<td>ALL CEO</td>
<td>2.70</td>
</tr>
<tr>
<td>REGENTS</td>
<td>3.16</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>3.06</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Helps</th>
<th>Does Not Help</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>2.5</td>
</tr>
<tr>
<td>1.0</td>
<td></td>
</tr>
</tbody>
</table>
The aggregate mean score given by study participants indicates solid agreement that the five-year review does achieve this impact. Chief instructional officers exhibited the greatest confidence that this is the case, but seven study participants (including two Regents' staff participants) expressed reservations sufficiently serious to justify their having to disagree. With comments consistent with previously discussed findings (cf. Report Dissemination), these respondents expressed doubt that the "public" is adequately informed that the five-year review is conducted. (One respondent, noting the generally low saliency higher education seems to enjoy as a public issue, commented that the public does not know and moreover does not particularly care.) Recommendations regarding report dissemination could well improve the extent to which the public at-large is informed of the five-year review and enhance the achievement of this intended outcome.

Nevertheless, to the extent that the Board of Regents itself comprises the primary and statutory representative of the public, and in view of the agreement of 80 percent of the study participants, the five-year review must be viewed as having successfully achieved this intended impact.

**Defense Against More Intrusive Review**

The final impact intended for the five-year review is unapologetically defensive and protectionist. Borrowing directly from the literature (particularly Barak and Berdahl, 1978), the OBR Final Report .. (1981) expresses the hope that the conduct of the five-year review by the Board of Regents "protects institutions against the possibility of a more obtrusive intervention by non-educational governmental agencies with less sensitivity to or solicitude for academic concerns and traditions .." (p. 9).

A "more obtrusive intervention" has indeed not occurred. Neither the Legislative Budget Office nor the Office of Budget and Management has launched its own program review or expressed any interest in doing so. To argue from this fact, however, that the five-year review has achieved this
result would be specious at very best. The disinterest of the latter two agencies in conducting program review very well may have occurred even without the five-year review although there is recent precedent in the LBO's conduct of a review of the state's vocational education system and there are examples of similar efforts by analogous agencies in other states, as described in Chapter II.

To assess, however, the extent to which this is viewed as a clear and present danger, study participants were asked to indicate the extent to which they agreed that if the Regents were not to conduct this review, another (non-educational) state agency probably would. The extent to which they agreed is reported in Table 21. The respondents were skeptical, agreeing only weakly that the five-year review would be replaced by something conducted by someone far worse than the Board of Regents.

Table 21

ASSESSMENT OF IMPACT:
PROTECTION AGAINST MORE INTRUSIVE REVIEW

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Assessment Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC CIO</td>
<td>2.60</td>
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<tr>
<td>TC CIO</td>
<td>2.57</td>
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<td>UA CIO</td>
<td>2.60</td>
</tr>
<tr>
<td>ALL CIO</td>
<td>2.59</td>
</tr>
<tr>
<td>CC CEO</td>
<td>2.66</td>
</tr>
<tr>
<td>TC CEO</td>
<td>3.00</td>
</tr>
<tr>
<td>UA CEO</td>
<td>2.00</td>
</tr>
<tr>
<td>ALL CEO</td>
<td>2.60</td>
</tr>
<tr>
<td>REGENTS</td>
<td>2.00</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2.48</td>
</tr>
</tbody>
</table>
The Regents' staff participants disagreed flatly, but their comments suggest that while the danger is neither clear nor present, neither is it spurious.

These participants, who work most closely with those agencies most likely to have an interest in program review, agreed with but one exception that although possible, such intervention is unlikely in the near future for reasons having little to do with the conduct of the five-year review. Furthermore, these participants suggested that under a set of circumstances which would impel such an intervention, the conduct of the five-year review would not prevent it. These circumstances would include a major scandal or a severe financial crisis. Under these circumstances, one participant noted, "the political body would not permit substantial crisis to prevail." In his view, however, the likely response would not be a merely annoying program review process, but a move toward centralized governance with implications far more ominous.

These findings suggest, therefore, that despite precedents in other states and in Ohio, those participating in the five-year review do not view the review as protecting institutions against more intrusive review by other agencies. While it has not failed in this regard, neither has it achieved this result, nor could it under any circumstances seem sufficiently significant to induce such an intervention.

Summary of Findings Relative to Evaluation Impact

A strict application of the utility standard of the Joint Committee on Standards for Evaluations relative to evaluation impact requires only that evaluations be planned and conducted in such ways as to encourage follow-through of its recommendations by members of the evaluation's various audiences. The responses of the chief executive officers in this study, the absence of any described follow-up procedures, and the absence of any documented evidence that any regular follow-up has ever occurred indicate that the five-year review fails to meet this standard satisfactorily.
When the standard is expanded to include an expectation that the evaluation achieve the impact its rationale and descriptions set as its intentions, the results are mixed. The extent to which the study participants agreed that the five-year review had achieved the six outcomes enunciated in the 1981 Final Report . . . is summarized in Table 22.

Table 22

SUMMARY OF ASSESSMENTS OF THE IMPACTS OF THE FIVE-YEAR REVIEW

<table>
<thead>
<tr>
<th>Intended Impact</th>
<th>Aggregate Score for Achievement of Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Fiscal Impact</td>
<td></td>
</tr>
<tr>
<td>a) Reallocation to Current Programs</td>
<td>2.61</td>
</tr>
<tr>
<td>b) Reallocation to New Areas of Need</td>
<td>2.71</td>
</tr>
<tr>
<td>2. Useful Suggestions for Program Improvement</td>
<td>3.29</td>
</tr>
<tr>
<td>3. Evaluation of Capital Expenditure Requests</td>
<td>Not Attempted</td>
</tr>
<tr>
<td>4. Revitalization of Commitment to Programs</td>
<td>2.87</td>
</tr>
<tr>
<td>5. Public Accountability</td>
<td>3.06</td>
</tr>
<tr>
<td>6. Protection</td>
<td>2.48</td>
</tr>
</tbody>
</table>

Achieved Impact Has Not Achieved Impact

| 4.0 | 2.5 | 1.0 |
On the basis of these findings, two of these outcomes should be abandoned as intentions. The five-year review has never directly been used in the evaluation of capital requests and the nature of the two processes is such as to suggest not doing so. The five-year review is widely seen as either not preventing or being able to prevent more intrusive state action if the circumstances are such as to make such intervention more likely than it is at present. In the one case, the outcome should be abandoned because the five-year review should not achieve it; in the other, because it cannot.

Of the remaining four, the five-year review is seen as having achieved a greater qualitative impact than a fiscal one. Even when one takes into mental account the blurring which occurs in the reports of institutional personnel regarding the impact of the five-year review as opposed to the impact of institutional review processes, the five-year review is rated well for its capacity to spark a revitalization of commitment to programs and its capacity to generate useful or helpful suggestions for program improvement. Coupled with the recommendations above regarding report dissemination, the review could improve its already satisfactory achievement of its public accountability intentions.

These findings suggest that the five-year review does not necessarily have a fiscal impact in each institution which participates in the review. Nearly 75 percent of the participants in this study, however, have realized cost savings they were able to reallocate internally which resulted from either the five-year review itself or from institutional program review processes which may or may not have been stimulated by the five-year review. The relatively weaker ratings of the achievement of fiscal impacts, however, are consistent with the recommendations emerging from the literature concerning program review that its proper emphasis is upon quality enhancement and maintenance of viability in a period of stable resources rather than upon the realization of cost savings.

When all the ratings of impact evaluation are aggregated, the review receives an acceptable overall "impact rating" of 2.83. This rating should be compared with participant ratings of the standard pertaining to cost effectiveness, to be discussed in Chapter V (cf. Feasibility Standards: Cost Effectiveness).
SUMMARY

Discussion of the eight characteristics considered by the Joint Committee on Standards to be essential to an evaluation's usefulness has been extensive, but appropriately so. Serious deficiencies in any one of these areas can render an evaluation an empty exercise at best and an offensively pointless irritant at least. The five-year review and participant perceptions of it were investigated in the study to ascertain the extent to which the review has sufficiently exhibited the characteristics deemed necessary to its utility.

On the basis of documentary evidence and the perceptions of the participants in this study, the review was found to have adequately and appropriately identified two audiences for the findings of the review. Furthermore, there is little support for expanding these audiences to include any audiences other than the Board of Regents itself and the participating institution.

As the review has been heretofore conceived and conducted, the personnel conducting it seem to have enjoyed a high degree of confidence in their competence and hence the review has met the crucial standard for evaluator credibility. On the strength of the comments solicited from study participants, however, it would appear there is strong sentiment that as the review moves toward a direct assessment of program quality, the competence of the Regents' staff personnel who have conducted the review to date must be augmented with specific programmatic expertise.

This study revealed solid agreement that the information which has been used in the conduct of the review is pertinent to its various designated criteria of quality, duplication, efficiency/productivity, cost, and need. There is evidence of significant concern, however, with regard to both the scope and the selection of information. Specific concerns were identified with the scope of advisory committee reports, the absence of specific financial data for an assessment of cost, the definitions of enrollments as the enrollment reports are used for specific purposes, and the use of degrees awarded for any purpose other
than an assessment of need or the possible impact of program duplication. Several remedies were suggested and should be pursued.

Findings also indicate that the five-year review meets the expectations of the Joint Committee with regard to valuational interpretation, as the standard is strictly construed. The procedures employed in the five-year review were judged clear, and participants judged the perspectives and rationale used to interpret the findings, as represented by the Regents' standards, as clear and well understood. In connection with this standard, however, this study investigated the extent to which valuational bases for the interpretation of findings were shared by the institutions as well as understood. The findings revealed that to a remarkable extent, the review has operated on the basis of a value set shared by both the Regents and all three types of two-year institutions comprising the Ohio system. Significant valuational dissonance was identified in four areas, however, and opportunities exist for strengthening the review in this regard through a process of value clarification and consequent reexamination of four of the 12 basic standards applied during the five-year review.

Study participants expressed general satisfaction with the timeliness of the release of the report of the findings of the review, which reports were characterized as sufficiently clear with regard to the reviews' purposes, procedures, and findings, and appropriately disseminated. Suggestions for expanding this distribution to achieve optimal usefulness, however, were made and should be pursued.

The findings identified a significant weakness of the review with regard to optimal utility. Respondents perceived (and an absence of documentary evidence to the contrary confirmed) an absence of any regular follow-up procedure by the Regents' staff conducting the review. This deficiency in meeting the Committee's minimum expectation or assuring that an evaluation has its intended impact should be redressed. This study pushed somewhat beyond the Committee's minimum expectations, however, in investigating the extent to which the review has achieved its desired impact despite the apparent absence of follow-up procedures. Of
the six enunciated intended impacts, the findings suggest that two be abandoned as intended impacts on the basis of a judgment that one such impact should not be achieved, and that the other cannot. Of the remainder, the review is seen as having differential fiscal impact but significant qualitative impact.

Of the eight characteristics deemed essential for evaluation utility, therefore, the five-year review has exhibited seven satisfactorily. Opportunities for improvement exist in several crucial areas, however, and should be pursued. The review is decidedly deficient in the adequacy of follow-up procedures, and means by which this deficiency can be remedied should be explored.
The findings reported in the last chapter related to those standards of the Joint Committee on Standards designed to enhance the usefulness of an evaluation. The standards to be discussed in this chapter are those intended to assure that evaluations are realistic, prudent, diplomatic and frugal (the feasibility standards) and those intended to ensure that an evaluation will be conducted legally, ethically, and with due regard for the welfare of those involved in or affected by the evaluation (the propriety standards). The assessment of the five-year review with regard to its attainment of the expectations of the feasibility standards and the propriety standards will be discussed in that sequence.

Feasibility
The design of an evaluation can be as intensive as one wants to make it. Its criteria may be apt, its indicators legion, and its valuational rectitude universally acknowledged. If it cannot be feasibly performed, however, it is better it not be attempted. A review process which is disruptive to the operation under investigation, laden with political bias, or bears costs which far outstrip the benefits to be derived, is worse than no review process at all. In recognition of this, the Joint Committee advanced three standards designed to enhance the feasibility of evaluations.

Practical Procedures
The first of these feasibility standards requires simply that evaluation procedures be practical, so that disruption is kept to a
minimum and needed information obtained. The simplicity of this standard belies its importance in state-level program review. A review process which compounds an already heavy burden of reporting by institutions to myriad agencies of government at all levels, or one which seriously disrupts the normal operations of an educational institution to the point of interfering with the educational process, would seriously threaten the institutional cooperation so essential to the success of program review.

Institutional study participants were, therefore, first asked to indicate the extent to which they agreed that the conduct of the five-year review has been minimally disruptive of the normal operation of their institutions. Their responses are summarized in Table 23.

Table 23
Assessment of the Disruptiveness of the Five-Year Review

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Assessment of Disruptiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC CIO</td>
<td>3.60</td>
</tr>
<tr>
<td>TC CIO</td>
<td>3.22</td>
</tr>
<tr>
<td>UA CIO</td>
<td>3.29</td>
</tr>
<tr>
<td>ALL CIO</td>
<td>3.33</td>
</tr>
<tr>
<td>CC CEO</td>
<td>3.33</td>
</tr>
<tr>
<td>TC CEO</td>
<td>2.75</td>
</tr>
<tr>
<td>UA CEO</td>
<td>3.33</td>
</tr>
<tr>
<td>ALL CEO</td>
<td>3.10</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3.26</td>
</tr>
</tbody>
</table>

Minimally Disruptive | Disruptive
---------------------|---------------------
4.0                  | 2.5                  | 1.0                  
These results demonstrate clearly that institutional personnel have not found the procedures of the five-year review particularly disruptive. Chief instructional officers fairly strongly agreed that the disruption was minimal, as did community college and university affiliated chief executive officers. Only four respondents disagreed, two of whom qualified their answers by noting that the procedures of the five-year review are not themselves disruptive, but because of the proliferating number of external reviews and evaluations, the five-year review contributes to a synergistic effect of frustration. Two respondents who characterized the five-year review as minimally disruptive, did comment, however, that the preparation of the reports required for the five-year review is time-consuming, and unreasonably so in those instances where the information is available elsewhere.

Respondents as a whole were asked to speak to the extent to which the information specifically requested for the purposes of the five-year review duplicates information submitted to the Regents' staff for other purposes. Their responses are contained in Table 24. Clearly, much of the information requested for the five-year review was seen as duplicatory by study participants as a whole. Chief executive officers as a group were most keenly aware of this duplication, followed closely by the Regents' staff participants themselves. The comments participants made, however, in explaining their responses may speak more directly to the standard than the above ratings.

As conceded in Chapter II, only three items of information collected for the purposes of the five-year review are not submitted to the Regents in any other form or for any other purpose. Program inventories, degrees awarded, course inventories, enrollments, and job placement reports are, however, submitted on an annual basis. Twelve respondents noted these specific duplications, but interestingly, only three of these indicated that the five-year review should rely upon the data submitted for these other purposes. Seven respondents asserted that while there is obvious duplication of information, this duplication is not burdensome, is
Table 24
Assessment of Extent to Which Information Submitted for Five-Year Review Duplicates Information Otherwise Available to OBR

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Assessment</th>
</tr>
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<td>ALL CIO</td>
<td>2.58</td>
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<tr>
<td>CC CEO</td>
<td>2.66</td>
</tr>
<tr>
<td>TC CEO</td>
<td>2.00</td>
</tr>
<tr>
<td>UA CEO</td>
<td>2.00</td>
</tr>
<tr>
<td>ALL CEO</td>
<td>2.25</td>
</tr>
<tr>
<td>REGENTS</td>
<td>2.40</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2.47</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Does Not Duplicate</th>
<th>Duplicates</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>2.5</td>
</tr>
</tbody>
</table>
inevitable, and is justifiable in view of the specific purposes of the five-year review.

All the above duplicate information except the placement report is submitted for the purposes of the Uniform Information System of the Ohio Board of Regents. That system was designed a number of years ago to serve purposes other than program review. It asks institutions to report enrollments and degrees awarded by general technical category (e.g., engineering technologies) not by specific program (e.g., electrical engineering, mechanical engineering, industrial technology, etc.). Several respondents noted that until the Uniform Information System can be redesigned to retrieve information by program, duplication for the purposes of the five-year review is unavoidable. Three other study participants admitted the information is partially duplicatory, but commented that the consolidation of this information in one report arrayed over a five-year period is so advantageous to the institution as to make the duplication justifiable.

Only one respondent—a technical college chief executive officer—complained of information duplication as a problem, but the problem as he saw it is not duplication of information on an intra-agency basis but on an inter-agency basis. This president again noted that much of the same information is used in North Central Association accreditation visits, State Division of Vocational Education review visits, as well as the Board of Regents' five-year review. He reported his frustration with the need to reschedule the same information in various formats for the same purposes of three different external review groups. He suggested, therefore, that if an institution has recently undergone review by one of these other agencies, the Regents' staff should attempt to use the information provided these other agencies, and verify through the site visit.

This suggestion may warrant further consideration, but the findings of this study do not indicate a consensus opinion that such duplication as does exist constitutes a problem carrying a high priority for remediation. The reporting burden could be lightened by a revision of
the Uniform Information System, the inclusion of placement information in that system, and the use of review documents provided other agencies, but there does not appear to be a clear mandate to do so. If the ratings in Table 24 are revised to reflect the extent to which study participants view information duplication as problematic, based upon explanatory comments, the five-year review's rating would rise from an unacceptable 2.47 to an acceptable 2.66, at the lowest. The ten remaining respondents noting the duplication made no comments indicating whether they believed it problematic.

Summary: Findings Relative to Practical Procedures

The findings of this study indicate that the procedures used in the five-year review are minimally disruptive of the normal operations of the participating two-year campuses. This study found, however, that some of the information requested for the five-year review does duplicate information submitted to the Regents for other purposes (although in a form unusable for program review) or submitted to other agencies for other evaluations. The reporting burden could be lightened by a revision of the Uniform Information System of the Board of Regents, the inclusion of job placement information in the system and the possible use of review reports recently supplied to other agencies. The results of this study are inconclusive, however, regarding the extent to which such duplication exists is perceived as a problem requiring remediation. The feasibility of the five-year review could be enhanced by changes which would reduce information duplication, but this study revealed no strong mandate to do so. An aggregate mean score for the extent to which the five-year review meets the JCS feasibility standard of practical procedures is a satisfactory 2.95.

Political Viability

The feasibility of an evaluation can be wrecked if the evaluation is not planned and conducted with anticipation of the competing positions
of various interest groups. The political viability of an evaluation depends upon an awareness of these positions and an attempt to obtain the cooperation of these groups so that possible attempts by any group to subvert, bias, or misapply the results can be averted or counteracted (JCS, 1982, p. 56). Discussion of the literature related to state program review amply demonstrated how politically sensitive and vulnerable state program review can be. Political conflict can result from the ordering of values and from the fundamental tension between accountability and institutional autonomy. The political viability of an evaluation can be threatened by unsatisfactorily resolved value conflicts. It can also be threatened by successful special pleadings by an institution to a board member with strong identification with that institution, or by the successful exertion of political pressure upon board members by a legislator to whom an institution has made a special appeal.

Fortunately, in Ohio there is far less tension between accountability and autonomy than the literature would lead one to expect. Throughout its history, the Board of Regents has consistently resisted proposals to centralize the governance of higher education and has doggedly attempted to maintain its role as a planning and coordinating (rather than a governing and controlling) state board. In its master plans, the Board has been as vocal in its defense of institutional autonomy as have the institutions. For their part, institutions have cooperated remarkably well with what most view as the reasonable expectations of public accountability and the responsibilities of living within a loosely defined system of public higher education, recognizing that in view of the size of the enterprise in this state, the only real alternative is more rather than less central control. The statutes of the state, particularly Ohio Revised Code 3333, fairly clearly delineate the respective roles of the Regents and the institutional boards of trustees. There is no evidence that the political viability of the five-year review is threatened by continuing conflict regarding autonomy and accountability. Indeed, we have already noted a remarkable degree of
valuational consonance between the institutions and the Regents in our discussion of the underlying values of the five-year review (cf. Valuational Interpretation: Valuational Consonance).

Furthermore, members of the Board of Regents have never been subject to the political pressures of special pleading, either directly by an institution, or indirectly by a board member or legislator, concerning any recommendations resulting from the five-year review. The process itself has sought concurrence with its recommendations prior to their presentation to the Board. Areas of disagreement have been successfully negotiated within the process. There has, therefore, to this point, never been the need for political end runs around the process.

Prior to concluding, the five-year review has assured its political viability, however, a fourth potential political threat must be explored. This is the threat of political bias. As briefly noted earlier, the two-year campus system in Ohio consists of three different types of institutions. Each type is perceived as having interests, values, and orientations not particularly shared by the other two, and in some cases, opposed. Too heavy an identification by the personnel conducting the review with the views held by any one of these institutional types, or any perception of differential treatment during the conduct of the five-year review, could result in charges of inequitable treatment and seriously impair the political viability of the five-year review. Perceptible bias in favor of one institution over another, would destroy the credibility of the five-year review process.

Study participants were, therefore, asked to report the extent to which they have perceived such political bias in the conduct of the five-year review. Thirty-three of the 37 participants responded, and their responses are reported in Table 25.

The aggregate mean score of 3.03 suggests solid agreement there has been no general perception of political bias in the conduct of the five-year review. The nature of this item, however, requires analysis by institutional affiliation. Community college and technical college participants signaled fairly strong agreement (3.25 and 3.27 respectively) that the five-year review has been free of political bias, but
university affiliates as a group agreed only weakly (2.70). Opinion among the university affiliated participants was actually evenly divided between those perceiving bias and those who had not. Four of these respondents reported they felt a definite bias against university affiliates, but three took pains to distinguish philosophical biases from political ones, and one granted that the bias which exists is probably not deliberate. These comments, and the absence of any consensus among university affiliated study participants in this regard, suggest that while bias against university branches has been perceived by a significant number of branch administrators, such bias cannot be viewed as having been either deliberate or pervasive. Such a perception has obviously not yet reached a point at which it threatens the political viability of the five-year review. The staff conducting the five-year review should, however, be made aware of the existence of this perception and make every effort to counter-act it.

Table 25
Extent to which Participants Have Perceived Political Bias in the Conduct of the Five-Year Review

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Perception of Bias</th>
</tr>
</thead>
<tbody>
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<td>CC CEO</td>
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<td>TC CEO</td>
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<td>UA CEO</td>
<td>2.33</td>
</tr>
<tr>
<td>ALL CEO</td>
<td>2.67</td>
</tr>
</tbody>
</table>

REGENTS 2.75
TOTAL 3.03

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<thead>
<tr>
<th>Have Perceived No Bias</th>
<th>Have Perceived Bias</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>2.5</td>
</tr>
</tbody>
</table>
Summary: Findings Relative to Political Viability

Due to the nature of Ohio's statutes, the philosophical positions of both the Ohio Board of Regents and Ohio's colleges and universities, and procedures of the five-year review itself, the major possible threats to the political viability of the five-year review appear to have been neutralized. The only possible problem with regard to the standard of political viability revealed by this study is a perception by a significant number of university affiliated participants that there is bias against university branches in the conduct of the five-year review. While the perception is not particularly widespread or strong, it is sufficient to justify some attention by the staff of the Board to contain such a perception. Nonetheless, the five-year review's overall rating for political viability must be considered satisfactory.

Cost Effectiveness

The last standard advanced to enhance the feasibility of evaluations is the expectation that it be cost effective, i.e., it should produce information of sufficient value to justify the resources expended for it. Obviously, if the five-year review were to cost more than it is worth it would not be feasible to conduct it.

Study participants were, therefore, asked to indicate the extent to which they agreed that the information produced by the five-year review is of sufficient value to justify the resources expended for it. They were asked to base their answers upon their estimate of the direct costs of the review. Their assessments are reported in Table 26. Study participants as a whole strongly agreed that the five-year review is cost effective. This finding was consistent across all participant groups, with only two study participants dissenting.
Table 26
Assessment of Cost Effectiveness of the Five-Year Review

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Assessment of Cost Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC CIO</td>
<td>3.40</td>
</tr>
<tr>
<td>TC CIO</td>
<td>3.22</td>
</tr>
<tr>
<td>UA CIO</td>
<td>3.29</td>
</tr>
<tr>
<td>ALL CIO</td>
<td>3.29</td>
</tr>
<tr>
<td>CC CEO</td>
<td>3.50</td>
</tr>
<tr>
<td>TC CEO</td>
<td>3.00</td>
</tr>
<tr>
<td>UA CEO</td>
<td>3.33</td>
</tr>
<tr>
<td>ALL CEO</td>
<td>3.22</td>
</tr>
<tr>
<td>REGENTS</td>
<td>3.80</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3.34</td>
</tr>
</tbody>
</table>

Cost Effective  Not Cost Effective

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>2.5</td>
<td>1.0</td>
</tr>
</tbody>
</table>

This finding need not be belabored, but should be compared to findings discussed earlier regarding evaluation impact. The five-year review is feasible with regard to cost effectiveness.

SUMMARY: Feasibility Standards

The second research question guiding this study asked how feasibly participants in the five-year review perceive the review to have been conducted. Three characteristics viewed as essential to the feasibility of program evaluations by the Joint Committee on Standards were investigated.

First, the five-year review was found to have had practical procedures, in that its conduct is perceived as having been minimally disruptive to the normal operations of participating institutions. Its information requirements do partially duplicate information submitted to the Regents in other forms and for other purposes, but this study
revealed no strong belief that this is a problem demanding attention of high priority. The feasibility of the review could be enhanced by eliminating these duplications by adopting several suggestions, but the extent to which this is viewed as a problem should be directly assessed before expending the resources required to implement such changes. The five-year review was judged satisfactory with regard to the standard requiring practical procedures.

Second, the five-year review was found to be politically viable due to the neutralization of valuational disputes by mutual accommodation, essential valuational consonance, and statutory role clarification. The negotiation phase in the preparation of the final recommendations of the five-year review appear also to have effectively responded to the risks of political end runs. The only potential threat to the continued political viability of the five-year review, and hence its feasibility, was found to be the perception of half of the university affiliated study participants that there has been bias against university branches, as an institutional type, in the conduct of the five-year review. This perception is not widespread, nor is it particularly strong, but it should be of some concern to those conducting the review, and may be an additional reason to add institutional representatives to the review teams as a counteractive measure.

Finally, the five-year review was judged cost effective by the participants in this study, a characteristic essential to the feasibility of an evaluation.

The findings of the study indicate that the five-year review has been feasibly conducted. A rating for the feasibility of the five-year review based upon aggregate scores on each of the items assessing feasibility is a satisfactory 3.07.

Propriety of Conduct

Evaluations affect the lives of people. They render judgments concerning the efficacy with which groups of professionals have fulfilled their professional commitments and provide information upon which
decisions are made as to whether instructional programs, to which faculty have devoted a significant part of their professional lives, are worth continuing. When conducted by an agency of the state, they become an instrument for the exercise of governmental authority. Evaluations must be conducted, therefore, in strict adherence to law with full respect for and conformity with the human, ethical, and professional values of both a democratic society and an idealistic profession. It is more than appropriate to explore the extent to which the five-year review legally, ethically, and with due regard for the welfare of those who have been involved in it, as well as those affected by its results. The Joint Committee on Standards issued eight standards designed to ensure the propriety of conduct of evaluations, six of which were seen to be applicable to the five-year review.

Conflict of Interest

A conflict of interest in the conduct of an evaluation occurs when the evaluator's private interest might be enhanced or impaired as a result of his evaluation activities. The Joint Committee acknowledges that conflicts of interest are frequently unavoidable, but recommends that any conflict of interest should be dealt with openly and honestly so that it does not compromise the evaluation's processes and results (JCS, 1981, p. 70). The Committee listed five possible sources of a conflict of interest:

a) the existence of a private financial interest in which the evaluator stands to gain or lose depending upon the results of the evaluation;

b) the existence of the possibility that the evaluator's agency or organization may stand to gain or lose as a result of the evaluation findings;

c) the existence of personal and/or political ties to the client which might be affected by findings which may reflect upon the client;
d) advancement of the evaluator's particular philosophical, theoretical, or political point of view by reporting particular findings; and

e) the existence of an employment incentive or disincentive which depends upon the reporting of either positive or negative findings.

Of these five possible sources of conflict of interest, the first two are not relevant to the conduct of the five-year review. The Regents' personnel conducting the five-year review have had nothing to gain or lose financially which has depended upon their recommendations for program continuation or inactivation. Neither can the Board of Regents itself be plausibly imagined either to gain or lose as a result of the review's findings. The latter three sources, however, are more plausible and should be discussed.

Strictly speaking, the client for this evaluation is the Ohio Board of Regents. The findings of the review do not reflect directly upon the Board of Regents, hence the existence of personal ties of the evaluators to the Board would have no impact upon the findings. Yet the point of this source of conflict can be lost in so strict a construction. Any personal ties with an institution which might be affected by findings which reflect upon that institution could pose such a conflict. Only once in the history of the five-year review has such a situation arisen. Dr. Max J. Lerner, Vice Chancellor for Two-Year Campuses of the Ohio Board of Regents and one of the two Regents' staff members responsible for the conduct of the five-year review, was founder and the first president of Lorain County Community College. As would be expected, he had deep personal ties with the College and the community. The College participated in the five-year review in 1979-1980. Lerner recognized, however, the possible perception that his personal ties to this institution could bias the findings. He, therefore, directed his Administrator for Two-Year Campus Programs to bear primary responsibility for the conduct of the review of this institution, and further directed that the site visit team be augmented by the addition of a third member. His participation was, therefore, kept minimal and there was no
perception that his personal ties had any effect upon the findings of the five-year review. The possibility of conflict of interest from this source has occurred only in this one instance, and it was dealt with.

The last two possible sources of a conflict of interest remain as potential, if not having actually occurred. The belief of a number of university affiliated study participants that there has been a perceptible bias against university branches in the conduct of the five-year review has already been reported (cf. Feasibility: Political Viability). Several of these, however, differentiated philosophical differences from political bias. The holding of a philosophical position is not seen as a problem of conflict of interest; indeed, as already noted, any educator who does not hold a strong philosophical or theoretical point of view which he brings to bear upon his task should be suspect for other reasons. If, however, he uses evaluation consciously to promote his point of view by reporting only those findings which tend to support his position while suppressing those which do not, the evaluation is tainted by conflict of interest. No one has ever claimed this has occurred (cf. Full Disclosure and Balanced Reporting subsequently discussed in this chapter).

Similarly, the mere existence of a possibility that the evaluator may subsequently be employed by an institution the programs of which he has reviewed does not itself constitute conflict of interest. If, however, this possibility governs the reporting of findings, a conflict of interest exists. In the history of the five-year review, neither individual responsible for its conduct has ever been an active candidate for employment in any of the institutions participating in the review. The possibility of an operable conflict of interest is further reduced by the fact that two individuals conduct the review. It is highly unlikely that both would have such a conflict at the same time with the same institution.

It is not enough, however, to report there is no evidence of any conflict of interest in the conduct of the five-year review. The mere appearance of impropriety can be as damaging as its occurrence. Study
participants were, therefore, asked, without an expectation to cite examples, to indicate the extent to which they have perceived the operation of any conflict of interest on the part of the Regents' personnel conducting the five-year review. Their responses are reported in Table 27.

Table 27
Assessment of Awareness of Conflict of Interest in the Conduct of the Five-Year Review

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Assessment Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC CIO</td>
<td>4.00</td>
</tr>
<tr>
<td>TC CIO</td>
<td>3.33</td>
</tr>
<tr>
<td>UA CIO</td>
<td>3.43</td>
</tr>
<tr>
<td>ALL CIO</td>
<td>3.52</td>
</tr>
<tr>
<td>CC CEO</td>
<td>3.00</td>
</tr>
<tr>
<td>TC CEO</td>
<td>3.00</td>
</tr>
<tr>
<td>UA CEO</td>
<td>3.66</td>
</tr>
<tr>
<td>ALL CEO</td>
<td>3.20</td>
</tr>
<tr>
<td>REGENTS</td>
<td>3.50</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3.43</td>
</tr>
</tbody>
</table>

No Conflict Perceived  Conflict Perceived
4.0  2.5  1.0
Study participants as a whole expressed fairly strong agreement they have perceived no conflicts of interest in the conduct of the five-year review. Only one respondent, a university affiliated chief instructional officer indicated any awareness of conflict of interest but no explanatory comment accompanied his response, leaving to speculation which conflict he had perceived. Overwhelmingly, however, the five-year review must be judged as having not only dealt effectively with possible sources of conflict of interest, but has avoided even the appearance of it. The first propriety standard has been amply met.

Full and Frank Disclosure

The issuance of a review report which conceals pertinent information or fails to disclose important limitations of the evaluation is improper. The Joint Committee, therefore, developed a standard relating to the full and frank disclosure of both findings and limitations. Reports which fail to disclose pertinent findings and fundamental limitations can amount to deception by omission.

Table 28
Assessment of Full Disclosure of the Pertinent Findings of the Five-Year Review

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Assessment of Full Disclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC CIO</td>
<td>3.60</td>
</tr>
<tr>
<td>TC CIO</td>
<td>3.44</td>
</tr>
<tr>
<td>UA CIO</td>
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<tr>
<td>ALL CIO</td>
<td>3.62</td>
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<tr>
<td>CC CEO</td>
<td>3.00</td>
</tr>
<tr>
<td>TC CEO</td>
<td>3.00</td>
</tr>
<tr>
<td>UA CEO</td>
<td>3.33</td>
</tr>
<tr>
<td>ALL CEO</td>
<td>3.10</td>
</tr>
<tr>
<td>REGENTS</td>
<td>3.00</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3.39</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fully Disclosed</th>
<th>Not Fully Disclosed</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
</tr>
</tbody>
</table>
Study participants were, therefore, first asked to assess the extent to which the oral and written reports of the five-year review have been open, direct, and honest in their disclosure of pertinent findings. Without dissent, study participants fairly strongly agreed they have (Table 28). One study participant qualified his response by noting that full and frank disclosure of pertinent findings is not an absolute good, i.e., there are many findings which may be pertinent but are better left unsaid in a public document. This Regents' staff participant characterized the reports, however, as duly tactful and appropriately so.

Obviously the five-year review is seen as more than adequately meeting the Committee's expectations for full and frank disclosure of pertinent findings. Study participants were also asked to indicate the extent to which the second expectation has been met, viz., full and frank disclosure of the limitations of the evaluation. As Table 29 indicates, study participants agreed, but considerably less strongly with more dissent than with the previous item. The frequency count of responses to this item reveals that six study participants (17.1% of the total), including four chief executive officers, believed the oral and written reports of the five-year review to have been less than fully open, direct, and honest in their disclosure of the limitations of the evaluation. Although only two participant groups noted this weakness in the report of findings, there is obviously an opportunity for improving the reports of the five-year review by adding a section making the limitations of the review more explicit. In view of the response to this item by the entire group of study participants, however, and the absence of any comments generated by this item, one must conclude that doing so does not command a high priority and failure to do so is not viewed as a serious problem.

An aggregate score of the responses to both items designed to assess the extent to which the five-year review meets the full and frank disclosure standard of the Joint Committee indicates fairly high satisfaction with the five-year review in this regard. The review's aggregate score on this standard is 3.24.
Table 29

Assessment of Full Disclosure of the Limitations of the Five-Year Review

<table>
<thead>
<tr>
<th>Participant</th>
<th>Group</th>
<th>Assessment of Full Disclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC</td>
<td>CIO</td>
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</tr>
<tr>
<td>TC</td>
<td>CIO</td>
<td>3.13</td>
</tr>
<tr>
<td>UA</td>
<td>CIO</td>
<td>3.43</td>
</tr>
<tr>
<td>ALL</td>
<td>CIO</td>
<td>3.30</td>
</tr>
<tr>
<td>CC</td>
<td>CEO</td>
<td>2.33</td>
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<tr>
<td>TC</td>
<td>CEO</td>
<td>3.00</td>
</tr>
<tr>
<td>UA</td>
<td>CEO</td>
<td>2.33</td>
</tr>
<tr>
<td>ALL</td>
<td>CEO</td>
<td>2.60</td>
</tr>
<tr>
<td>REGENTS</td>
<td></td>
<td>3.25</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>3.09</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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<th>Not Fully Disclosed</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
</tr>
</tbody>
</table>
Public's Right to Know

The third propriety standard relevant to the five-year review is one which states that the formal parties to an evaluation should respect and assure the public's right to know, within the limits of other related principles. A right-to-know audience is defined as one which is entitled legally and ethically to be informed about the intents, operations, and outcomes of an evaluation.

This standard poses three reasonable expectations of the five-year review if it is to be judged as properly conducted. The first of these is that the findings be made public. The second is that public disclosure of these findings be appropriately balanced with respect for the rights of those participating in the review. The third is the expectation that findings and recommendations arising from the review be disclosed to the institutional participants, preferably prior to their public release. Failure to fulfill any one of these expectations would be irresponsible, unethical, threatening, and would open the review to possibilities of politically or philosophically motivated abuse.

The first of these expectations appears to be more than adequately met. The final report of the five-year review is annually presented both orally and in documentary form at a regular, public meeting of the Board of Regents. Such meetings are conducted in full conformity with the "sunshine" laws of the State of Ohio, the proceedings of which are recorded and retained in the minutes of the meetings. The report of the review is made part of those minutes. There can be no doubt the findings are made public.

The second expectation requires some balance between this public right to know and the personal and professional rights of those participating in the review. Particularly negative findings, with personal identification, could very well permanently affect adversely the professional reputations of individuals. Study participants were, therefore, asked to judge whether the public's right to know is appropriately balanced with respect for the individual rights of faculty and institutional administrators. The extent to which they agreed there has been
an appropriate balance between the two is reported in Table 30. Chief instructional officers strongly agreed the balance has been appropriate, with solid concurrence from every remaining participant group. Only one study participant dissented, and his concern in this regard was that the public is not involved enough. Obviously, the second expectation under the general rubric of the public's right to know is more than adequately met by the five-year review.

Table 30
Assessment of Appropriateness of Balance Between Rights and Public's Right to Know

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Assessment of Appropriateness</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC CIO</td>
<td>3.80</td>
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<tr>
<td>TC CIO</td>
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</tr>
<tr>
<td>UA CIO</td>
<td>3.71</td>
</tr>
<tr>
<td>ALL CIO</td>
<td>3.57</td>
</tr>
<tr>
<td>CC CEO</td>
<td>3.00</td>
</tr>
<tr>
<td>TC CEO</td>
<td>3.00</td>
</tr>
<tr>
<td>UA CEO</td>
<td>3.00</td>
</tr>
<tr>
<td>ALL CEO</td>
<td>3.00</td>
</tr>
<tr>
<td>REGENTS</td>
<td>3.00</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3.36</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Appropriate</th>
<th>Inappropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4.0</td>
<td>2.5</td>
</tr>
</tbody>
</table>
The final expectation is that of advance disclosure prior to public release. Advance disclosure serves two purposes. First, it provides a necessary check against conclusions and recommendations based upon inaccurate or incomplete information (cf. Accuracy Standards: Systematic Data Control). Secondly, it provides institutions with a reasonable opportunity to prepare public rebuttal, if necessary. Institutional participants were, therefore, asked to indicate the extent to which they agreed they were provided ample opportunity for advance review of the report of the five-year review prior to its public release. Their assessments are reported in Table 31. No participant characterized his opportunity for advance review as anything less than ample. Five of the six participant groups either strongly or fairly strongly agreed their opportunity has been ample.

Thus, the five-year review must be judged as having more than satisfactorily fulfilled the three dimensions of the Joint Committee's standard regarding the public's right to know. An aggregate mean score for the extent to which it meets this propriety standard is a fairly strong 3.37.

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Assessment of Opportunity</th>
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</thead>
<tbody>
<tr>
<td>CC CIO</td>
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<td>TC CIO</td>
<td>3.13</td>
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<tr>
<td>UA CIO</td>
<td>3.57</td>
</tr>
<tr>
<td>ALL CIO</td>
<td>3.35</td>
</tr>
<tr>
<td>CC CEO</td>
<td>3.33</td>
</tr>
<tr>
<td>TC CEO</td>
<td>3.50</td>
</tr>
<tr>
<td>UA CEO</td>
<td>3.50</td>
</tr>
<tr>
<td>ALL CEO</td>
<td>3.44</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3.38</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunity</th>
<th>Ample</th>
<th>Not Ample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4.0</td>
<td>2.5</td>
</tr>
</tbody>
</table>
Table 32
Assessment of Extent to Which Confidentiality has been Protected

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC CIO</td>
<td>3.80</td>
</tr>
<tr>
<td>TC CIO</td>
<td>3.33</td>
</tr>
<tr>
<td>UA CIO</td>
<td>3.60</td>
</tr>
<tr>
<td>ALL CIO</td>
<td>3.53</td>
</tr>
<tr>
<td>CC CEO</td>
<td>3.00</td>
</tr>
<tr>
<td>TC CEO</td>
<td>3.00</td>
</tr>
<tr>
<td>UA CEO</td>
<td>4.00</td>
</tr>
<tr>
<td>ALL CEO</td>
<td>3.14</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3.42</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Confidentiality Protected</th>
<th>Confidentiality Not Protected</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>2.5</td>
</tr>
<tr>
<td>1.0</td>
<td></td>
</tr>
</tbody>
</table>

Rights of Human Subjects

The fourth propriety standard requires that evaluations be designed and conducted so that the rights and welfare of human subjects are respected and protected. Strictly speaking, there are no "human subjects" in the five-year review whose rights are legally protected. As already discussed, however, there are human participants whose personal and professional rights should be respected and protected as a matter of professional ethics if not law. That these rights have been protected in the contents of the report of the findings of the review has already been established. The discussion of this standard in Chapter II, however, suggested further investigation of one such right.

As noted in Chapter II, the five-year review includes qualitative information in the form of informal discussions and interviews with chief executive officers, deans, and sometimes, faculty. Sometimes this information is of a confidential nature, divulgence of the source of
which could be destructive to the interests of the provider. Any lapse in the protection of these sources of information would not only be highly improper, but would also have the more instrumental effect of depriving the review of valuable information and justly so.

The two most common sources of this information, the chief executive officers and the chief instructional officers, were, therefore, asked to indicate the extent to which they agreed that the personnel conducting the review have protected and assured the confidentiality of any sensitive information they may have provided. Their responses are reported in Table 32. No participant reported any lapse in the protection of confidential or sensitive information provided in the five-year review. The aggregate mean score of 3.42 indicates fairly strong agreement that this aspect of the standard relating to the rights of human subjects has been more than satisfactorily met.

**Human Interactions**

Closely allied in an almost summary manner is the fifth propriety standard of the Joint Committee. This standard requires evaluators to respect human dignity and worth in their interactions with other persons associated with an evaluation. As noted earlier, a program review process conducted with arrogance, insensitivity, or disrespect for the human and professional dignity of the persons participating in the review would reflect dishonor upon the agency sponsoring the review, devastate the review process, abuse responsibility, and call into serious question the professionalism of the evaluator.
Table 33
Assessment of Appropriateness of Human Interactions

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC CIO</td>
<td>3.80</td>
</tr>
<tr>
<td>TC CIO</td>
<td>3.56</td>
</tr>
<tr>
<td>UA CIO</td>
<td>3.71</td>
</tr>
<tr>
<td>ALL CIO</td>
<td>3.67</td>
</tr>
<tr>
<td>CC CEO</td>
<td>3.33</td>
</tr>
<tr>
<td>TC CEO</td>
<td>3.50</td>
</tr>
<tr>
<td>UA CEO</td>
<td>3.66</td>
</tr>
<tr>
<td>ALL CEO</td>
<td>3.50</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3.61</td>
</tr>
</tbody>
</table>

<table>
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<th>Appropriate</th>
<th>Inappropriate</th>
</tr>
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<td>4.0</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
</tr>
</tbody>
</table>

Study participants were, therefore, asked to indicate the extent to which they agreed that in conducting the five-year review, the Regents' personnel demonstrated an appropriate degree of respect for the human dignity and worth of the institutional personnel associated with the review. Their assessments are recorded in Table 33. Only one other standard assessed in this study generated a higher aggregate rating. There was neither dissent nor controversy in this regard, and no significant difference between anonymous respondents and those who were interviewed. The personnel conducting the five-year review have more than adequately met the Committee's expectations with regard to their human interactions.
Balanced Reporting

The final propriety standard of the Joint Committee identified as relevant to the five-year review relates to balanced reporting. The standard states that evaluations should be complete and fair in the presentation of the strengths and weaknesses of the programs under investigation. Discussion of this standard in Chapter II enumerates a number of problems resulting from evaluations, a reading of which would attribute authorship to either Pollyanna or Jeremiah. Unreported strengths can be useful in correcting identified weaknesses; actions taken to correct weaknesses may inadvertently diminish unidentified strengths. Furthermore, a review concentrating solely on weaknesses can demoralize faculty, and distort the perceptions of the public.

Conversely, reports which amount to a paean of praise raise suspicions that the review is a public relations effort in advocacy, and eliminate both internal and external credibility.

Those who have read the reports of the findings of the five-year review most closely indicate general satisfaction that the reports have been complete and fair in their presentation of the strengths and weaknesses of the programs under review (Table 34). Only four of the 37 respondents disagreed. Interestingly, three of the four disagreed because they believed the review lacks the capacity to assess program quality, findings for which constitute the only strengths and weaknesses which are of interest.

In the judgment of most participants in this study, however, the five-year review more than satisfactorily meets the JCS standard for balanced reporting.
Table 34
Assessment of Report Balance

<table>
<thead>
<tr>
<th>Participant Group</th>
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Balanced | Not Balanced
---|---
4.0 | 2.5 | 1.0

**SUMMARY: Propriety Standards**

The third research question guiding this study asked whether the five-year review has been conducted legally, ethically, and with due regard for the welfare of those involved in and affected by it. The five-year review was assessed against six of the eight standards issued by the Joint Committee on Standards intended to ensure the propriety of the conduct of evaluations.

The participants in this study reported having perceived no conflicts of interest on the part of the Regents' personnel conducting the review. In their collective judgment, without dissent, they found the reports of the five-year review to have fully disclosed the pertinent findings of the review. There was general satisfaction with the extent to which the review's report has disclosed the limitations of the evaluation, but six dissenting opinions suggest the report of the review could be improved in this regard. Reports were also judged as satisfactorily balanced, reporting both the strengths and weaknesses of the programs under review.
With regard to the more human dimensions of propriety, the participants judged the five-year review as having appropriately balanced the public's right to know (a right assured by its reporting procedures and state sponsorship) with the individual rights of institutional faculty and administrators. The review has assured fairness in providing opportunity for advance review of findings which no participant characterized as less than ample. The personnel conducting the review were seen as having scrupulously protected the confidentiality of any sensitive information which may have been supplied during the review and were rated highly for having conducted the review with an appropriate degree of respect for the human and professional dignity and worth of the institutional personnel associated with the review.

In short, in no area has the propriety with which the five-year review has been conducted been subject to doubt. The review's aggregate rating for the propriety of its conduct is a strong 3.34. Put another way, of 262 separate judgments made, only twelve expressed any opinion short of full compliance with the expectations of the propriety standards.

SUMMARY

This chapter investigated the extent to which the five-year review has been both feasibly and properly conducted. Questions were raised with regard to whether the review has been realistic, prudent, diplomatic, and frugal; and inquiry was made into the extent to which its conduct has been ethical, legal, and in line with human and professional values of mutual respect. While adjustments can be made to improve the utility of a program review process, and while data collection and interpretation techniques can be refined to remedy serious deficiencies in an evaluation's accuracy, critical deficiencies in the propriety of the conduct of the review process, or impractical, expensive disruptive and bias-laden procedures would strike blows to ongoing periodic state-level program review from which it would take years to recover.
The absence of significant controversy regarding the feasibility and propriety of conduct of the five-year review is, therefore, not only a major strength of the five-year review, but must be considered a crucial strength.
CHAPTER VI
FINDINGS RELATIVE TO THE ACCURACY
OF THE FIVE-YEAR REVIEW

Having established general agreement that the five-year review meets professional expectations for utility, feasibility, and propriety of conduct, attention now turns to its accuracy. The Joint Committee on Standards has proposed that evaluations be assessed with regard to the extent to which they reveal and convey technically adequate information about the features of the object being studied that determine its worth or merit. It has proposed 11 standards intended to ensure this accuracy. According to the Committee, the object of the evaluation must be clearly identified and its context satisfactorily examined. The purposes and procedures should be monitored and described, so their adequacy can be assessed. The information generated for the purposes of the evaluation should be reliable, from defensible sources, and should be used in such a way as to assure that the interpretation arrived at is valid for the given use. Once the data is collected, it should be reviewed for errors, and analyzed appropriately. The evaluation conclusions should be explicitly justified so that audiences can assess them. Finally, evaluation procedures should provide safeguards to protect findings and reports against distortion by any party to the evaluation. This study examined the extent to which the professionals who have participated in the five-year review over the previous three years perceive the review as yielding accurate information, by the Joint Committee's standards. The findings pertaining to each standard will be discussed successively.

Object Identification

The first standard requires that the object of the evaluation be sufficiently examined so that the form(s) of the object being considered in the evaluation can be clearly identified. At first glance, there would seem to be very little to discuss with regard to the five-year review's attainment of this standard. Technical education programs have
operated in state-assisted colleges and universities under the aegis of the Ohio Board of Regents since the mid 1960's. They are defined in law (Ohio Revised Code 3357), the administrative rules of the State of Ohio (Ohio Administrative Code 3333-1-04), and in the policies and procedures of the Ohio Board of Regents (Operating Manual for Two-Year Campus Programs, and Uniform Information System Manual). Since 1972, specific technical programs have been defined in a statewide standard taxonomy of technical program titles. Since 1975, the five-year review has examined these programs without any confusion on the part of anyone as to what indeed is being examined. Strictly construed, therefore, this standard is amply met by the five-year review. Concealed within this standard, however, are several issues relating to definition and selection raised in the literature which should be discussed.

**Definitional Issues**

The first issue is a definitional one and relates to the level of intensity courses must reach before it is considered a program, and hence, subject to review. Rule 3333-1-04 (J) states that "the staff of the Board of Regents will conduct periodic review of all approved technical programs ..." Since 1979, however, the Board has recognized three different levels of technical programs differentiated by their intensity, i.e., the total number of credit hours unique to the specialization. The Regents begin to recognize the existence of a "program" when 18 to 24 credit hours are offered in an identifiable specialization, which in combination with the technical credit hours of an allied existing approved associate degree program, leads to an associate degree. This comprises a major which is approvable at the staff level. Twenty-seven to 33 unique technical credit hours, offered during the freshman year leading to an intermediate employment objective but articulated with the sophomore year of an associate degree program, comprises a "one-plus-one" program. (The term "certificate program" has
been carefully avoided in that the Board has heretofore declined to consider terminal one-year certificate programs eligible for subsidy.) These programs are approved by the Chancellor with the concurrence of the Board's standing committee on Academic Affairs. Any program in excess of 33 quarter credit hours is considered of sufficient content to justify a total of 45 credit hours and hence be offered as a full associate degree program, approvable only by the full Board. All such programs are technical programs approved either directly by the Board or by an agent of the Board acting by virtue of delegated authority. One would, therefore, assume by a reading of Rule 3333-1-04(J) that all such programs are subject to the five-year review, but in fact, only full associate degree programs are examined in detail. Majors and one-plus-one programs are listed on the program inventory for the possible check of duplication, and their program summaries are checked to assure they remain within the approved limits of their intensity. Left unexamined, however, are advisory committee input (majors and free-standing one-plus-one programs are not required to have one), the adequacy of faculty leadership (faculty teaching majors and one-plus-ones are not asked to be identified), enrollments, number of graduates, and placement records (institutions are asked to aggregate such data for all majors offered under a given associate degree program). At the conclusion of the review, the Board is asked to approve for continuation only the full associate degree programs, the implicit assumption being that approval of continuation of an associate degree program constitutes approval of all its existing majors and one-year programs ipso facto.

It is difficult logically to defend this policy within the context of the five-year review. Majors and one-plus-one programs are approved on the same criteria as are applied to associate degree programs. There are showings of need, projections of enrollments, specified outcomes in the form of occupational objectives, endorsements of an advisory committee, projections of costs, and assumptions are made about the
comparability of the quality of such programs to the others offered by this institution. They do indeed represent a unique commitment of resources. They are advertized as specific programs leading to an occupational objective. That they are not specifically subsequently reviewed constitutes a logical inconsistency.

Finding that an associate degree program meets all review criteria does not by itself support an inference that all its majors do. It requires little stretching of the imagination to conceive of an extremely weak, ineffective, and expensive major, the shortcomings of which are buried in the aggregated data for an associate degree program which itself is strong despite its branch withering at its expense. The implicit assumption, therefore, that because an associate degree program is needed, its majors are needed, rests upon a logical fallacy.

More than simple logical tidiness may be involved. As discussed in the review of the literature, specific information regarding programs of lesser intensity such as majors is important because it helps identify possible areas of program expansion. It identifies actual cost centers more accurately, protects against possible review evasion, and guards against the use of "major" designations as a mask for programs of low marketability and less than satisfactory quality.

Study participants were not asked to render judgment in this regard inasmuch as deciding which programs to review is the client's policy issue which should, therefore, be examined by the Chancellor and the Board's standing committee on Academic Affairs. Logical analysis and the review of the literature strongly suggest, however, that the issue indeed be examined.

Selection and Scheduling Issues

The second set of issues raised in the discussion of the literature and the findings of this study as they relate to the standard for object identification pertains to the selection and scheduling of programs for review.
The open questions which concluded both the questionnaire and the interviews revealed that while the current object identification of the five-year review is unambiguous (technical associate degree programs), it should not be limited either to the two-year sector or the technical side of the two-year instructional mission. One community college president noted that the need for accountability is not limited to two-year institutions and technical education. The facts do raise questions as to why the Regents have procedures for program review only for technical programs. For the current fiscal year (1981-1982) technical subsidies amounted to only 10.7 percent of the total instructional subsidies distributed by the Ohio Board of Regents, and student enrollments in technical associate degree programs in 1981 amounted to less than 12.9 percent of the total full-time equivalent enrollments in state-assisted colleges and universities. To limit program review only to technical programs, therefore, raises questions of both equity and rationality. It would appear that heretofore the Regents have been straining at a gnat while swallowing a camel unexamined. The willingness of community college personnel to see the review expanded with appropriate modifications to the general studies "side of the house," as one community college president put it, is matched enthusiastically by technical college personnel willing to "share the honor," as Chancellor Moulton put it.

There is growing evidence that this perceived myopia in the focus of the Regents' program review effort will soon be rectified. Chancellor Moulton has repeatedly expressed his support for broadening the base of program review and expansion of program review, at least at the institutional level, is one of the cornerstones of the forthcoming Master Plan. Indeed, boards of trustees of all state-assisted colleges and universities are under legislative mandate (Am. Sub. H.B. 167) to adopt program review procedures during this biennium. Thus, the limitations identified by participants in this study with regard to this aspect of object identification appear likely to be corrected in the relatively near future. In light of these developments and the comments
from the participants in this study, the personnel conducting the five-year review should immediately initiate institutional consultations preparatory to building the capacity to review general studies associate degree programs into the five-year review.

A final issue raised by the literature with regard to object identification warrants discussion. It relates to the method by which states select programs for review and the scheduling of the reviews. While on the face of it, these appear to be merely procedural issues, decisions on selection and scheduling can have major substantive implications. One of the first decisions a state must make in this regard is its selection mechanism, i.e., whether it shall use a scheduling or a triggering mechanism for selecting programs for review. It may establish a schedule for the reviewing of all programs over a period of years, or it may only use a triggering mechanism for the review of programs for which there is evidence of deficiency on some pre-selected criterion. An additional decision must be made as to dimensional focus, which can be lateral (all programs of one type offered by all institutions are reviewed simultaneously) or vertical (all the programs offered by a pre-selected number of institutions are reviewed without reference to program type). Graphic clarification of this latter choice is provided in Figure 4. For example, lateral review would either schedule or trigger one or all B programs to be reviewed in a given year at all institutions, T through Z. The following year, one or all E programs would be reviewed at institutions T through Z, etc. A vertical review would schedule (or result from a triggering mechanism) institutions T, U, and V one year, reviewing all programs B through H; institutions W and X the following year, etc.

A somewhat complex array of trade-offs attends each of the above decisions. A scheduling mechanism for program selection is simpler than the triggering mechanism. A scheduled review has a greater degree of predictability from the institutional viewpoint than has the triggering mechanism. A scheduled review is less threatening than a triggered one, which would approach a program with a presumption of deficiency. A
**Figure 4:** Choices of Dimensional Focus in State-Level Program Review

![Table and Diagram](https://example.com/table-diagram.png)
scheduled review is perceived as more equitable in that all programs of all institutions are ultimately reviewed whether vertically or horizontally. Triggered reviews, however, are more flexible and allow the state agency to conduct reviews more closely attuned to shifting priorities (allowing it to review thematically if you will, "quality" this year, "cost" the next). Triggered reviews conserve state-level staff resources by a sharper focus on problem areas, and it provides a clearer rationale for the conduct of a lateral review.

The decision on dimensional focus poses similar trade-offs. A vertical review can examine the pattern of service of the institution as a whole, can take into consideration the interrelationships of programs, and can identify weaknesses which are endemic to an institution and hence require an institution-wide remedy, and is more sensitive to contextual factors than is a lateral review. The vertical review can be seen as more logically consistent with technical program review in that the need for program B at institution W is generally based upon the needs of the area that college serves, irrespective of the needs of the areas served by institutions X, Y, or Z. An exclusively vertical review, however, deprives the state of the advantages of the lateral review. Lateral reviews permit the state staff to investigate program duplication, program need, program costs, and program quality on a statewide basis when there are statewide interests or concerns involved. Lateral reviews pose less risk of violations of institutional autonomy than do horizontal reviews; it is far clearer in a lateral review that a program is being reviewed, not an institution, with all the ramifications the latter might have for institutional governance. Lateral review can, therefore, be seen as the only type of review which is appropriate for a planning and coordinating state agency to conduct. Those holding this view would argue that state agencies having statewide planning responsibilities should approach program review from a statewide perspective, and hence, conduct only statewide (or lateral) reviews. Vertical review, they would argue, is what an institution should do in its own interest.
In view of the complexity of these issues and the trade-offs inherent to the choices within them, it is with some astonishment that one observes the absence of any significant controversy regarding the selection mechanism and dimensional focus of the five-year review. The five-year review is clearly a scheduled, vertical review, and this study revealed no evidence that either choice has heretofore been questioned. One's astonishment must subside, however, with the knowledge that the five-year review antedates most of the scholarship which has been devoted to state-level program review by four years. It was one of the first program review efforts mounted by any state higher education agency in the nation. It is a scheduled, vertical review primarily because such an approach was simpler organizationally, was logically consistent with a needs test which was locally referenced, and could be implemented more quickly with minimal staff resources. To make these observations is not to imply that the five-year review should be anything other than a scheduled, vertical review, but they do tend to illuminate the fact that these decisions were made without the agonies of choice suggested by the foregoing, and without significant controversy. Indeed, in view of the potential for debate buried within each of these choices, it may be considered a masterstroke that the review was initiated at all.

That the above issues and trade-offs have not been raised, however, is not to say they have been resolved to everyone's satisfaction. At least one important consumer of the findings of the five-year review, Chancellor Edward Q. Moulton, has indicated a desire to reopen these issues. In a conversation with the author, Moulton expressed general satisfaction with the five-year review as currently organized and conducted, but lamented its current incapacity to accommodate special reviews of a specific program offered by all institutions.

At the risk of opening Pandora's box, therefore, a suggestion that a fresh look be given to the selection mechanism and dimensional focus of the five-year review is not unreasonable. A strong possibility exists, moreover, that the choices discussed above are not as dichotomous as the
literature would lead us to believe, and there is a consequent possi-
bility, therefore, that the advantageous attributes attending one such
choice need not necessarily be "traded-off" to achieve a desired
characteristic attending the other choice. To put the argument in the
simplest of terms, it is possible to have the best of both worlds.

Once disabused of the notion that the choices are mutually exclu-
sive, it is a relatively simple task to conceive of a program review
process which is both scheduled and triggered, vertical and lateral. The
findings of this study certainly have not indicated a great deal of
dissatisfaction with the current organization of the five-year review.
It seems to have achieved the advantages attributed to the scheduled,
vertical review: simplicity of logic and organization, predictability,
balance, contextual sensitivity, and institutional perspective. It also
appears to have avoided the potential for encroachment upon insti-
tutional autonomy. While all the findings have not yet been discussed,
this study has not revealed any significant disagreement with the
current basic assumptions, organization, selection mechanisms, and focus
of the five-year review. There is no reason fundamentally to disturb its
presently existing form.

One can add a component, however, without disturbing existing ones,
and there is precedent in this state for doing so. In March, 1980, the
Two-Year Campus Committee of the Board of Regents asked the staff to
report on the success of two non-traditional associate degree programs
the Board had approved on a pilot basis for ten institutions across the
state over the previous five years. This review was not incorporated
into the regular five-year review process, but was conducted by the same
personnel who have conducted the five-year review. This review was
termed a "special review," and obviously, constituted a lateral review,
triggered by the concerns of one Board member.

There is no reason a triggered lateral review procedure could not be
made part of the five-year review process, so that in addition to the
regularly scheduled vertical review occurring each year, a number of
lateral reviews could be conducted simultaneously, triggered by state-
wide concerns. While the number of reviews would be subject to the
limitations of Regents' staff resources and constrained by other feasibility considerations, this lateral review component would afford the Board the advantages of lateral review without sacrificing the benefits of its regularly scheduled review. It could focus on problem areas without losing balance. It could examine statewide concerns without neglecting local needs. It could gain flexibility without sacrificing predictability.

Triggering criteria could be both fixed and variable. A fixed criterion triggering technical program lateral review could be statewide data showing that less than N percent of the graduates from program X are being placed in jobs related to that technology. If it is necessary further to delimit the scope of the lateral review, sub-criteria could include placement data showing that program X's statewide placement rate has been below desired levels for two or three successive years; financial data indicating that program X not only has poor placement, but consumes resources of statewide significance; there are more than five such programs in the state with evidence of a geographic maldistribution.

Variable criteria could, of course, change from year to year, depending upon the concerns. Such criteria could include concerns over a particularly costly program statewide; concerns expressed by national accrediting groups or professional associations that offering program X at the associate degree level is questionable; concerns expressed by statewide employers over the quality of the graduates of program X; any other concerns Board members may have regarding the statewide performance of a particular program.

The lateral review could be incorporated into the regular review process by announcing the programs subject to lateral review at the same time the information requests to the scheduled institutions are issued. The information burden on scheduled institutions would not increase, and would be minimal for non-scheduled institutions inasmuch as they would be asked to submit program information only for identified programs.
In some such manner, the Board of Regents could gain that of which it currently denies itself in the five-year review. At the same time, it could preserve that which it already enjoys in the operation of the five-year review. By reexamining decisions made seven years ago in light of the experience gained over the past seven years, the scholarship which has been devoted to program review, and the above discussion, the five-year review can be strengthened. A discussion of the scheduling mechanism and dimensional focus of the five-year review should be initiated.

Summary: Findings Relative to Object Identification

Ample documentary and historical evidence exists to support the conclusion that the five-year review meets the Joint Committee's standards with regard to object identification as that standard so strictly construed. Several issues raised in the literature which are pertinent to object identification, however, should be attended to.

The first of these issues is definitional. While the Regents' Rule 3333-1-04 states that all approved technical programs shall be subject to the five-year review, and while the Regents' Operating Manual for Two-Year Campus Programs recognizes three levels of intensity of technical programs (majors, one-plus-one programs, and associate degree programs), only associate degree programs are fully reviewed. This policy does not survive logical analysis and is evasive of qualitative questions peculiar to programs of lesser intensity than full associate degree programs. This policy should be examined.

The second issue relates to the selection of programs for review. It does not appear defensible to limit the Regents' program review activities to technical associate degree programs. Doing so raises serious questions as to the rationality and equity of the five-year review. Recent effort to expand program review to other programs and other levels should be encouraged and intensified. For its part, the personnel conducting the five-year review should immediately initiate institutional consultations preparatory to including associate of arts and
general studies programs into the five-year review process.

The final issue relates to the selection mechanism and dimensional focus of the five-year review. This study suggests that while the current scheduled and vertical nature of the five-year review need not itself be disturbed, the Board of Regents can significantly expand its flexibility and focus by adding a triggered and lateral review component. A means of doing so was suggested in the foregoing section. Its merit should be further explored.

All of these issues relating to object identification lie at the policy level and can only be decided by the primary audience of the five-year review, the Board of Regents itself. They are potential rather than current features of the five-year review, and for both reasons the participants in this study were not asked to evaluate them. Hence a rating or aggregate score for the five-year review with regard to object identification was neither possible nor necessary. It should suffice to note that the five-year review meets this standard as strictly construed, but that issues which are ancillary to this standard have been opened and should be dealt with.

Context Analysis

One of the reasons cited for the conduct of a vertical review is that it permits greater sensitivity to the context within which an institution's programs operate. The Joint Committee believes that the accuracy of an evaluation is enhanced if the likely contextual influences upon programs are examined and identified. Conditions surrounding a program may influence its functioning. Such conditions could include its geographic location, its timing, the political and social climate of the region at the time, relevant professional activities in progress, and pertinent economic conditions (JCS, 1981, p. 104). The thrust of this standard is that the accuracy of the interpretation requires some consideration of context.

Institutional participants in this study were asked to indicate the extent to which Regents' personnel conducting the review sufficiently
took into account the social, economic, political, and geographic context within which their institutions operate. The ratings reported in Table 35 reveal fairly strong satisfaction in this regard having been expressed by the chief instructional officers, but considerably weaker agreement having been expressed by chief executive officers. The significant difference between the aggregated mean scores of the two suggest further investigation. Frequency counts on the responses of the chief executive officers reveals that the difference in opinion with regard to context analysis is illusory and could be attributed to several non-substantive factors. The first of these factors is that two chief executive officers reported they could not respond to the item, not having given it much thought. The number of respondents was, therefore, decreased to eight. Of these eight, six (75%) agreed that the analysis of context was adequate, but none provided the verbal emphasis this researcher relied upon to differentiate strong agreement from agreement. Of the two chief executive officers who disagreed, one cited as his reason the misperception that an investigation of duplication of the programs offered by his remote institution indicates a misunderstanding of his institution's context. (The duplication criterion was not, in fact, investigated at his institution.) Fundamental disagreement, therefore, appears to have been confined to one chief executive officer who provided verbal emphasis sufficient to mark it as a strong disagreement (his specific response was "Hell no!").

On the basis of 28 usable responses, therefore, 96 percent of which expressed satisfaction with the context analysis which has occurred in the five-year review, one can safely conclude the five-year review meets this standard to the system's satisfaction. Before moving on, however, a number of potentially useful comments and suggestions provided in response to the open question at the conclusion of the questionnaire/interview should be reported.
Table 35
ASSESSMENT OF THE ADEQUACY OF CONTEXT ANALYSIS IN THE FIVE-YEAR REVIEW

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One participant suggested that a more direct attempt be made to examine local conditions and general environment, even if doing so would increase the institution's reporting requirements. Another participant suggested the inclusion of a brief narrative, either on an institution-wide basis, or by program, which would recount the historical development and evolution of programs and provide opportunities for the inclusion of recent community surveys which may have been generated by the institution with regard to particular programs. Another chief executive officer suggested an opportunity be provided to include demographic data which would relate to program enrollments. Such demographic data could be used to illuminate the need analysis, and perhaps qualify applications of minimum enrollment standards. Another chief executive officer suggested that during the five-year review, the institution's overall mission and objectives be examined in the context
of the Regents' Master Plan. Any differences between the Regents' plan and the institution's could be usefully discussed during the five-year review. Doing so would relate the review more closely with broad statewide concerns and goals.

Each of these suggestions has merit and could further enhance the adequacy of context analysis in the five-year review.

Described Purposes and Procedures

Imperfectly understood purposes, and inadequately described procedures, can severely damage an evaluation. According to the Joint Committee, both should be described in sufficient detail so that they can be identified and assessed.

Pointing to the Final Report . . . (1981) of the five-year review, the first section of which provides a narrative of the rationale (purposes) of and procedures employed in the five-year review, was not deemed sufficient evidence that this standard has been met. Evidence was sought, therefore, to support a finding that they are not only described, but clear to those participating in this study, and because purposes can be clear without a comprehensible set of procedures (with the converse equally possible), study participants were asked to indicate the extent to which the purposes and procedures of the five-year review are clear to them personally, in two separate responses.

As Table 36 indicates, both the purposes and procedures of the five-year review appear to have been made quite clear to those most directly participating in the review. The finding was both unambiguous and non-controversial. The combined aggregate score on the two items of 3.31 indicates fairly strong agreement that the efforts clearly to describe the purposes and procedures of the five-year review have been successful.
Defensible Information Sources

A fourth standard fundamental to the accuracy of an evaluation is the requirement that its sources of information be described in enough detail so that the adequacy of the information can be assessed. The Final Report . . . (OBR, 1981) leaves little doubt that the participating institution is the sole source of all of the information currently collected for the purposes of the five-year review (pp. 13-27). Much more will be discussed regarding the adequacy of this information in the two following sections on validity and reliability, but with regard to this standard, questions remain as to whether exclusive reliance upon the institution to provide all of the information used during the five-year review is defensible, i.e., viewed as appropriate.

There are, of course, other sources of information pertaining to the performance of a technical associate degree program. Information could be collected directly from students currently enrolled in the program,
from recent graduates, from employers, from advisory committee members, accrediting association, etc., none of which the five-year review has heretofore tapped. As Table 37 indicates, institutional personnel agreed fairly strongly that the review's reliance upon the institution to provide all the information used during the five-year review is appropriate. Opinion was evenly divided, however, among the Regents' staff participants.

Table 37
ASSESSMENT OF APPROPRIATENESS OF INFORMATION SOURCES

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<td>TOTAL</td>
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<table>
<thead>
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<th>Inappropriate</th>
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<tbody>
<tr>
<td>4.0</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
</tr>
</tbody>
</table>
Comments were illuminating. No one questioned the basic soundness of obtaining most of the information from the institution itself, and several study participants noted that such an approach may be the only realistic option in view of the staffing constraints of the Regents'. None of the study participants, however, suggested that the source of information be necessarily limited to the institution itself. Two chief executive officers and one Regents' staff member stated that this source of information should be sufficient so long as the Regents' retain the option of pursuing other information sources when there is reason to do so. Two presidents and four Regents' staff participants suggested that the review should augment its information sources to gain independent verification. One technical college president stated he would welcome such independent documentation and believed the review would benefit from the addition of other viewpoints.

Thus, while study participants as a whole view the current information sources of the five-year review as appropriate, considerable sentiment was expressed that if Regents' staff resources were to permit it, the review could be strengthened by tapping other information sources, particularly on a selective and supplementary basis. The suggestion is offered as an opportunity for improvement. In the judgment of study participants as a whole, however, the standard of the Joint Committee for defensible information sources is more than adequately met.

Reliability

Based upon several of the above comments, and upon simple logic, the defensibility of the information sources currently used by the five-year review is closely related to how reliable this information is perceived to be. The fifth accuracy standard to be discussed, therefore, simply states that the information obtained should be reliable for its intended use.

According to the Joint Committee, a reliable measure is one which provides consistent indication of the characteristic being investigated.
The specific reliability concerns relevant to an evaluation will vary according to the different types and uses of the information. The items of information used in the five-year review are indicators of a particular characteristic but not measures as typically understood in social science research. Traditional concerns for reliability and hence, measures of reliability, do not apply to the information used in the five-year review. The reliability of concern to the five-year review, because of the nature of the information requested, is simply the accuracy of the information submitted for the specific purposes of the five-year review.

As reported in Chapter IV, six of the seven separate reports comprising the information package used for the five-year review pose questions with regard to the reliability of the information presented. Inasmuch as this information is exclusively used as the basis for the conclusions drawn during the review it is essential that the institutions themselves view the information supplied as accurate and reliably consistent across time within the institution. The six items of information at issue are the program summary, the listing of electives, the report of faculty credentials, the advisory committee report, the report of enrollments, and the report of degrees awarded and placement of graduates. Institutional study participants were asked to indicate the extent to which they agreed that each of these items of information yields accurate and hence, reliable, information. Ratings for the accuracy of each item resulting from participant responses are reported in Table 38.

General confidence was expressed by study participants in the reliability of the program summary, setting forth the requirements of the program by quarter and by course classification (general studies, basic/related, and technical). Nevertheless, some doubts were expressed. Three chief executive officers warned that course titles themselves can be deceptive, and unless checked against other information (e.g., course descriptions, course inventories, and/or course syllabi), the information reported on the program summaries could very
Table 38
Assessment of the Reliability of Information
Used in the Five-Year Review

<table>
<thead>
<tr>
<th>Item of Information</th>
<th>Assessment of Reliability</th>
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<td>Program Summary</td>
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<tr>
<td>Listing of Electives</td>
<td>3.50</td>
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<td>Faculty Qualifications</td>
<td>3.50</td>
</tr>
<tr>
<td>Advisory Committee Report</td>
<td>3.00</td>
</tr>
<tr>
<td>Enrollment Report</td>
<td>3.50</td>
</tr>
<tr>
<td>Degrees Awarded and Placement Report</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reliable</th>
<th>Unreliable</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
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</tr>
<tr>
<td>1.0</td>
<td></td>
</tr>
</tbody>
</table>
well lead to erroneous conclusions, particularly as those conclusions relate to distinctions among basic/related, general studies, and technical course classifications. This latter concern was echoed by a Regents' staff participant. Course descriptions are available in the college bulletins requested as supplementary information. Course inventories can be easily checked for the autonomous institutions and can be checked (although with greater difficulty) for the university affiliates, inasmuch as this information is submitted to the Regents as part of its Uniform Information System. Course syllabi could be requested on a supplementary basis in the event of a dispute over the proper classification of particular courses. Taking such measures would essentially serve the purpose of verifying the accuracy of the program summary.

Somewhat less confidence was expressed (aggregate score of 2.94, as opposed to 3.18) in the accuracy of the listing of electives, a finding which characterized all but one participant group. The same doubts as were raised regarding the program summary attended this report as well. The same remedies and supplementary verification would make this report more reliable for its intended use. Of all the reports requested for the five-year review, however, this report as a separate information request could probably easily be eliminated with no loss to the five-year review's interest. As noted above, course inventories are submitted and annually updated by each institution. Unless a course appears on the inventory submitted to the Regents, it is not subsidized. Thus, the accuracy of the information is assured. The courses on that inventory are listed by instructional area and could easily be used in lieu of the listing of electives specially requested for the five-year review. Program summaries could be checked against the course inventory listing, and any course offered by a department not specifically required for that department's program could be safely assumed to be either a service course for other departments or an elective for its students. The review's listing of electives is duplicatory and unnecessarily so in view of the availability of the same information elsewhere. The course
inventory would also be more reliable. It is recommended, therefore, that the special report of electives be eliminated in favor of the use of the course inventories of the Regents' Uniform Information System.

With only three respondents dissenting (and they, without comment), study participants expressed significantly greater confidence in the reliability of the report of faculty qualifications. Agreement was far weaker, however, than the information contained in the advisory committee report. While most of the institutional participants reported believing the information accurate, six of the 29 institutional respondents to this item disagreed, two of them strongly so. As has already been noted in the discussion of the review's selection and scope of information, and as will be further emphasized in our discussion of the validity of the use of this information, a significant number of study participants view the advisory committee report with deep misgivings. Nearly half of the institutional respondents questioned the report of the names and addresses of advisory committee members, and a report of the number of meetings held, as being pertinent to the issue of quality. As shall be discussed in greater detail in the following section, more than half of all the respondents consider the information insufficient to justify the conclusions reached about advisory committee utilization. Obviously, the reliability of the advisory committee report is the least of its problems.

Only two respondents disagreed that the enrollment reports yield accurate information, with very little difference among the various participant groups. Several participants reiterated their belief that course enrollments, rather than number of student majors, be used for the purposes of the five-year review, but only one study participant disagreed with the basic reliability of this information as currently defined.

The most significant problem with reliability, however, attends the job placement report. While the aggregate score given the reliability of the placement report (2.82) indicates an acceptable level of agreement with regard to the reliability of this information, the importance of
this information in the five-year review suggests that the doubts expressed by 26 percent of the respondents warrants further investigation. Concerns about the reliability of this information come from three sources. First, there is no standardization of follow-up procedure among institutions or sometimes even among departments within institutions. Practices vary from a one-shot mailed questionnaire sent by the placement office to graduates one month after graduation, to a decentralized telephone survey of graduates performed by faculty. Some institutions account for only those graduates registering with an institution-wide placement service, others survey each student each quarter. Some sample, others conduct a census (as is the expectation). Non-response rates, of course, vary widely with the procedures used, and the potential for non-response bias is very high. The Regents' staff personnel have repeatedly stated the expectation that for the purposes of accountability, only a census will do, but sampling (of varying degrees of scientific validity) continues. There is also an absence of standardization of instrumentation. The five-year review's instructions merely describe the various categories of information requested, e.g., placed in related jobs, placed in non-related jobs, unemployed, unavailable for employment, etc. Instrumentation is left up to the institution. Perhaps more critically, the definitions of "related jobs" and "non-related jobs" have not been sharp, leaving such distinctions to be made by the self-reports of students themselves, the placement officer or his secretary, or the faculty member. The reliability of the placement report is, therefore, highly dubious, much more highly dubious than this study reveals. In view of the review's current vertical dimensional focus, perhaps the questionable reliability of the placement report can be tolerated so long as the procedures, instrumentation, and interpretations are at least consistent within an institution and so long as the reviewers are aware of the potential sources of the contamination of this report. To the extent that this information is used for comparative purposes, however, as would be the case if the lateral review component is added, as suggested earlier, measures should
be taken to improve the reliability of the placement report. Even if the lateral component were not to be added, the reliability of the placement report should be improved in view of its importance to the five-year review. The Regents' personnel responsible for the conduct of the five-year review should initiate consultations with the institutional placement personnel responsible for the placement function with the objective of optimizing the reliability of the placement report.

**Summary: Findings Relative to Reliability**

The findings of this study revealed general confidence in the reliability of three of the items of information requested for the five-year review. Discussion of the reliability of the listing of electives, however, suggested that while this information is viewed as acceptably reliable, an information source yielding the same information with greater accuracy is otherwise available in the course inventory of the Regents' Uniform Information System. For reasons of reliability, therefore, as well as to reduce somewhat the reporting burden of the institutions for the five-year review, the special listing of electives should be eliminated from the review's information request.

The findings revealed the existence of significant doubts regarding the reliability of the advisory committee reports which should be resolved in any remedial action taken to correct the weaknesses of this information with regard to other findings relative to this report (scope and validity). Finally, the above discussion suggests that the placement report is even less reliable than study participants already perceive it to be. A means of strengthening the reliability of this report should be found.

These weaknesses and suggestions notwithstanding, the information used in the five-year review is perceived as reasonably reliable. The aggregate rating for the five-year review with regard to this standard is 3.04.
Validity

The sixth standard for the accuracy of evaluations would require that the instruments and procedures of the five-year review be chosen and implemented in ways that will assure that the interpretation arrived at is valid for the given use. To assess the validity of the five-year review's findings, study participants were first given the item of information used in the five-year review, and then asked to indicate the extent to which they agreed that the information is sufficient to support a prima facie conclusion regarding the standard or criterion for which it is used. Respondents were told that for these purposes, a prima facie conclusion was a preliminary conclusion valid on the face of it, or at first impression, subject to refutation by additional evidence. Table 39 reports the information item in conjunction with the prima facie conclusion reached on its basis, and reports respondents' assessments of the validity of the conclusion. A glance at the aggregate ratings given by study participants for each conclusion would suggest that the five-year review is in serious trouble with regard to its validity. Study participants as a group rated only four of the ten conclusions as of prima facie validity. Program summaries are obviously viewed as sufficient to conclude that a program is/is not in compliance with the curricular standards of OBR Rule 3333-1-04, as is the report of faculty qualifications with reference to the faculty standards of the rule. One can validly draw conclusions about curricular flexibility from the listing of electives in the judgment of study participants, and can (but with the weakest of support) draw conclusions regarding program effectiveness on the basis of the placement report. None of the remaining six conclusions however, is viewed as having prima facie validity. If these findings are themselves valid, they constitute an astonishing departure from the general pattern of findings throughout this study. How a process, 70 percent of the conclusions of which are viewed as invalid or of dubious validity, can have generated the ratings reported to this point is indeed remarkable.

One must look to respondents' comments to explain this conundrum, and indeed, they do. Respondent after respondent, on item after item,
### Table 39

**ASSESSMENT OF THE VALIDITY OF THE CONCLUSIONS REACHED IN THE FIVE-YEAR REVIEW ON THE BASIS OF THE INFORMATION PROVIDED**

<table>
<thead>
<tr>
<th>Information Item</th>
<th>Conclusion</th>
<th>Assessment of Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>CC</td>
</tr>
<tr>
<td>Program Summary</td>
<td>Compliance/Non-Compliance with curricular standards</td>
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</tr>
<tr>
<td>Listing of Electives</td>
<td>Curricular Flexibility</td>
<td>3.40</td>
</tr>
<tr>
<td></td>
<td>Curricular Over-Extension</td>
<td>2.40</td>
</tr>
<tr>
<td>Faculty Qualifications</td>
<td>Compliance/Non-Compliance with Faculty Standards</td>
<td>2.80</td>
</tr>
<tr>
<td>Advisory Committee Report</td>
<td>Advisory Committee Utilization</td>
<td>2.50</td>
</tr>
<tr>
<td>Enrollment Report</td>
<td>Acceptable/Unacceptable Cost</td>
<td>2.40</td>
</tr>
<tr>
<td></td>
<td>Acceptable/Unacceptable Level of Need</td>
<td>2.60</td>
</tr>
<tr>
<td></td>
<td>Acceptable/Unacceptable Levels of Attrition</td>
<td>2.40</td>
</tr>
<tr>
<td>Placement Report</td>
<td>Program Effectiveness/Ineffectiveness</td>
<td>2.40</td>
</tr>
<tr>
<td></td>
<td>Program Productivity/Under-productivity</td>
<td>2.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Valid</th>
<th>Invalid</th>
</tr>
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<td>4.0</td>
<td>2.5</td>
</tr>
<tr>
<td>1.0</td>
<td></td>
</tr>
</tbody>
</table>
remarked that the information (already conceded as pertinent to its use) is sufficient to justify further investigation and to raise pertinent questions with regard to the conclusion to which these preliminary indicators point, but they are not themselves sufficient upon which to base any conclusions. Some respondents noted agreement or disagreement on the basis of specified assumptions that the information was to be used (or not used) in conjunction with other information. Others provided the myriad alternative interpretations possible from the information possible, suggesting, again, that in the absence of other information, the conclusion reached does not stand. Particularly odious to study participants were any conclusions drawn regarding attrition without information more specific to the phenomenon. Two general comments provided by a community college president and a university affiliated chief instructional officer strike to the heart of the matter. The dean noted that valid conclusions, as the term is usually understood, are very difficult to trace to any one item of information. The community college president stated at the outset of this series of questions that he disagreed with any reference to validity in the five-year review— or any program evaluation, for that matter— because the conclusions of reviews are judgmental and subjective, not empirical and objective. In his view, the hallmark of validity is replicability, and he held that program reviews are not replicable in the sense of yielding the same results if approached by any other person with the same information or even by the same person with a slightly different approach to the information.

All the above comments are, of course, quite correct. Moreover, they more accurately describe the actual decisional processes of the five-year review than these items did. The final decision to recommend program continuation or urge its inactivation is not directly made on the basis of any of the information requested for the five-year review. The information is used to raise questions about, not draw conclusions about, a given characteristic or criterion. The final recommendation is based more upon the evidentiary rules of a civil case in law. Such
decisions are based upon a preponderance of evidence regarding multiple criteria, and even then are subject to a negotiation process which itself sometimes defies logical analysis, much less the imperatives of validity.

This researcher must concede, therefore, that the measures he selected for the assessment of the validity of the five-year review were themselves invalid. This is not to say that the Joint Committee's standard does not apply to the five-year review, or that some means of assessing it could not be developed. One means of doing so would have been to ask study participants to review the same information available to personnel conducting the review with regard to programs recommended for continuation or inactivation over the past five years and then asking them whether the preponderance of evidence supported the ultimate recommendation, but such an approach would not have been feasible.

It must, therefore, suffice to report that although the standard of validity is applicable to the five-year review, it could not be taken into account, but that there are no indications of significant problems in this regard. Conclusions with regard to the review's performance on this standard must also await judgment based upon the preponderance of evidence.

Systematic Data Control

Errors in reporting can result in errors of interpretation. The existence of errors in the data, unchecked and uncorrected, can discredit the entire review. The seventh accuracy standard promulgated by the Joint Committee speaks directly to this issue:

The data collected, processed, and reported in an evaluation should be reviewed and corrected, so that the results of the evaluation will not be flawed (JCS, 1981, p. 124).

That this standard is met by the five-year review is a conclusion supported both by the current procedures of the review and by the perceptions of the participants in this study.
There are two checks against incorrect data built into the processes of the five-year review. The first of these occurs during the second phase of the review, preliminary review of information submitted and the preparation of preliminary findings (Figure 3). Program inventories are routinely checked against the OBR Master Inventory for program omissions. Program summaries are checked against program inventories for completeness and course classifications are checked against classification guidelines and the master course inventory for course misclassifications. Reports of faculty qualifications are checked against faculty names designated on program summaries for completeness. Anomalies in enrollment reports, degrees awarded and placement reports are cross checked against other pertinent reports submitted to the Regents. In a relatively recent procedure, listings of electives and programs' summaries are checked against course inventories submitted for subsidy purposes for inclusiveness. Any errors identified in this process are raised in the letter of preliminary findings sent to the chief executive officer prior to the site visit, and correction or clarification is requested. During the third phase of the review, the opportunity for correcting these errors or other data upon which preliminary findings are based which the institution believes to be erroneous is provided the participating institution. Letters of response which conclude phase three of the review, and the site visit occurring in phase four assure institutions of two opportunities to review and correct, if necessary, the information collected, processed, and reported for the purposes of the five-year review.

That institutional participants regard this opportunity as ample has already been reported elsewhere (Feasibility Standards: Public's Right to Know, Table 31). Participants as a whole fairly strongly agreed (3.38 aggregate score) that this is the case and no participant characterized the opportunity as anything less than ample.
On the basis of these findings, therefore, the five-year review must be judged as meeting the accuracy standard for systematic data control.

**Analysis of Quantitative and Qualitative Information**

A fundamental standard for the accuracy of evaluations requires that both the quantitative and the qualitative information used in an evaluation be appropriately and systematically analyzed to assure supportable conclusions (JCS, 1981, pp. 127; 130). Quantitative information consists of those facts and claims which are represented by numerical values. Qualitative information consists of those statements of facts, assertions, explanations, and interpretations which are presented in narrative rather than numerical form.

Both types of information are used in the five-year review. The first phases of the review rely almost entirely upon quantitative information, both types of information are generally presented in the third phase; and the fourth phase (the site visit and negotiation phase) relies almost entirely upon qualitative information. Institutional participants were asked to indicate the extent to which they agreed that both types of information were appropriately analyzed to ensure supportable interpretations for their institutions. The rating assessment resulting from their responses are reported in Table 40. Study participants as a group agreed fairly strongly that the qualitative information has been appropriately analyzed, and agreed solidly that the quantitative information has been appropriately analyzed to ensure supportable interpretations. The frequency count on both items reveals that only two participants viewed the quantitative analysis as inappropriate, of whom one complained the analysis was too detailed. Only one participant disputed the appropriateness of the qualitative analysis, complaining of the existence of "some tunnel vision," by which one must assume he meant reviewers either did not accept or were unresponsive to a difference of opinion.
Table 40

ASSESSMENTS OF APPROPRIATENESS
OF ANALYSIS OF DATA

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Assessment of Appropriateness of Analysis</th>
<th></th>
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</thead>
<tbody>
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<td>Qualitative Data</td>
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<td>3.57</td>
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<td>ALL CIO</td>
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<td>3.38</td>
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<td>TC CEO</td>
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</tr>
<tr>
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</tr>
<tr>
<td>TOTAL</td>
<td>3.17</td>
<td>3.30</td>
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</tbody>
</table>

Appropriate | Inappropriate
--- | ---
4.0 | 2.5 | 1.0

There appears to be, however, general satisfaction with the analysis of both the quantitative and the qualitative data as it is used to ensure supportable interpretations. The five-year review must be regarded as having met the requirements of these standards to the satisfaction of those participating in the review and most directly affected by its conclusions.

Justified Conclusions

The tenth standard relating to evaluation accuracy promulgated by the Joint Committee states that the conclusions reached in an evaluation should be explicitly justified. Audiences cannot assess the accuracy of
an evaluation's conclusions if they are not explicitly justified.

At the conclusion of each institution's five-year review, the personnel conducting the review prepare recommendations regarding each program for adoption by the Board of Regents. One of three recommendations is made: continuation until the next review, continuation with modification (usually redesignation as a major), or inactivation. The point at issue with reference to this standard is whether explicit justification is provided for each of these recommendations.

The participants in this study indicated a fairly solid agreement that the conclusions contained in the final report of the five-year review are explicitly justified (Table 41). Only one chief instructional officer disagreed with this assessment, but he was joined by three chief executive officers and two Regents' staff members. While disagreement expressed by only 17 percent of this study's participants is not sufficient to overturn the basic finding, the source of the disagreement does warrant investigation for possible improvements in the reporting of the conclusions of the review.

One chief executive officer, whose response was perhaps misoded as a disagreement, stated that based upon the assumptions of the review, the conclusions were explicitly justified, but that his basic assumptions were different and would have led to different conclusions. In other words, the conclusions were justified within the meaning of this standard, but were not "justified" as in "warranted." Others (four participants) explained disagreement was more relevant to the meaning of this standard, and essentially expressed the same belief. These participants indicated that while the rationale for most of the recommendations for most of the programs (particularly those recommended for inactivation) is made explicit, the rationale is not explicit in all cases (particularly with regard to those programs recommended for continuation).

An examination of the Final Report . . . of the Five-Year Review (OBR, 1981) indicates that this belief is based upon the facts of the
Table 41

ASSESSMENT OF EXTENT TO WHICH CONCLUSIONS OF REVIEW ARE EXPLICITLY JUSTIFIED

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Assessment</th>
</tr>
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<td>REGENTS</td>
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<tr>
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<table>
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<th>Justification</th>
<th>Justification</th>
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<td>Not Explicit</td>
</tr>
<tr>
<td>4.0</td>
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</table>
presentation of the findings of the review. In this report of findings, institutional reports are organized topically rather than programmatically, i.e. "curriculum," etc., rather than addressing each of the above with "computer science technology," "law enforcement technology," etc. The only programs specifically discussed, therefore, are those for which there is an identified deficiency or concern. At the conclusion of each institution's report, a "blanket blessing" is given all programs unless specifically discussed earlier. To say "there is no reason not to continue all programs except the following" may not appear specific, but as a justification, it is not inexplicit. It is certainly true that when a program is recommended for inactivation, specific reasons relating to that program alone are indeed cited. It would be possible, of course, to write the report the other way, but doing so would unnecessarily increase the volume of the report itself and materially reduce its readability. Thus, the above perception may reflect nothing more than simple recognition of the format of the reports. In view of the information provided for each program, explicit justifications could be given for each recommendation and each program, but the findings of this study do not suggest that the editorial decision not to do so in the final report of the review must be overturned.

In broad terms, therefore, it must be concluded that the five-year review meets the standards for evaluation calling for justified conclusions. Recommendations for inactivation or redesignation are explicitly to specifically defended in the final report; recommendations for continuation are defensible specifically, if necessary. Such is the essence of this standard.
Objective Reporting

The final standard of the Joint Committee on Standards is designed further to protect an evaluation from personal bias as it may afflict the accuracy of the evaluation. This standard specifically deals with non-objectivity in data collection and analysis, calls for procedural safeguards to protect evaluation findings and reports against distortion by the personal feelings and biases of any party to the evaluation.

Although the substantial absence of bias on the part of the personnel who have conducted the five-year review heretofore has been reported elsewhere, it is important that the procedures of the review itself be found to guard against distortion of the findings should the personnel conducting the review change. A number of the procedures discussed above should militate against such distortion; specifically, two member teams, public disclosure, advance disclosure, the negotiation phase, and the opportunity for public rebuttal. The question, however, is the extent to which the participants in this study view these procedures as adequate. Their ratings of the adequacy of these procedures as safeguards against distortion by personal bias are reported in Table 42. Chief instructional officers fairly strongly (and unanimously) agreed that the procedures of the five-year review have provided adequate safeguards against distortion by personal bias. Four chief executive officers and one Regents' staff member, however, were not as sure.

Two of those who disagreed explained that their response was not due to any procedural deficiency of the five-year review, but was, rather, based upon their conviction that no procedure can eliminate bias. One technical college president asserted, "Judgments by their very nature are bias-laden, whether they come from the Regents' staff or the institution itself."

Two other dissenters, however, suggested a means by which procedural safeguards against distortion by bias could be strengthened. Both recommended an expansion of the review team, consisting of a peer review panel which would minimize the possibility of the polluting influences
of bias. As noted elsewhere for other reasons, this suggestion merits further investigation. The current two-member team is better in this regard than one man review, but its procedural capacity to serve as a check against non-objective reporting is vitiated by the fact that both are Regents' staff members, one of whom serves in a staff role to the other. It is conceivable, though no specific incidences of it have been cited, that distortions through bias would not surface until the advance disclosure, and would persist to the point of public disclosure, forcing the institution into a public defense of a virtue by which time would already have been effectively if unjustly besmirched.

Table 42

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC CIO</td>
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</tr>
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<td>UA CIO</td>
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<td>ALL CIO</td>
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<td>CC CEO</td>
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<td>TC CEO</td>
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</tr>
<tr>
<td>ALL CEO</td>
<td>2.67</td>
</tr>
<tr>
<td>REGENTS</td>
<td>2.75</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3.09</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adequate</th>
<th>Inadequate</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>2.5</td>
</tr>
</tbody>
</table>
It must be concluded, therefore, that although there is general satisfaction with the adequacy of current procedural safeguards against the distortion of the findings of the five-year review by personal bias, there is an opportunity for strengthening the five-year review in this regard. The opportunity should be pursued.

SUMMARY

This chapter has examined the extent to which the five-year review reveals and conveys technically accurate information about the associate degree programs it purports to study. Its satisfactory fulfillment of the 11 standards suggested by the Joint Committee on Standards was investigated.

As the first standard is strictly construed, there is ample evidence that the five-year review has more than adequately defined and identified the objects of its attention. The literature regarding state-level program review, however, suggests that there are a number of open issues of object identification which should be attended to. The first of these relates to the policy of not fully reviewing programs of lesser intensity than the associate degree programs with which they are allied. The second issue relates to the limitation of the Regents' program review activities to technical associate degree programs. The third raises questions concerning the selection mechanism and dimensional focus of the five-year review. The above discussion of each of these open issues suggests various means of resolving these open issues before they generate open conflict regarding the fundamental operation of the five-year review.

The operation of a program can be so influenced by its context that failure to take that context adequately into account can and should raise serious questions about the accuracy of any evaluation of that program. The findings of this study indicate that the five-year review has done so to the near universal satisfaction of those who have participated in the three most recent five-year reviews. A number of suggestions were advanced, however, by the participants in this study to enhance further the adequacy of the review's context analysis.
An assessment of the accuracy of a program evaluation is not possible if its purposes are unclearly understood and its procedures imperfectly described. The findings of this study indicate that the purposes of the five-year review are well understood, and that the procedures employed in its conduct have been fully and clearly described.

The accuracy of an evaluation depends heavily upon the extent to which its sources of information are defensible. Participants in this study overwhelmingly endorsed the basic soundness of the current source of the information used during the five-year review, but a number of study participants suggested augmenting this source with sources of information which would provide independent verification. Herein lies an opportunity for improvement.

The findings of this study also identified a number of ways to improve the reliability of much of the information used during the five-year review. Suggestions included eliminating the special listing of electives in preference for use of the UIS course inventory, expanding the scope of the advisory committee report, and materially strengthening the reliability of the placement report.

The potential for the accuracy of the five-year review is further confirmed by findings which indicate that the quantitative and the qualitative information used in the five-year review is appropriately analyzed, and that adequate justification is provided for the recommendations resulting from the five-year review. A means of further assuring that the accuracy of the findings is not impaired by distortion by personal biases, viz., an expansion of the review team suggested earlier for other reasons, was suggested and should be explored, despite the finding of general satisfaction that the procedures of the review already adequately assure such protection.

This study provided no direct findings with regard to the validity of the measures used during the five-year review. This is not to say, however, that conclusions may not be finally drawn concerning the extent to which the five-year review addresses this standard. The heart of this
standard is assurance that the information used is of a nature appropriate to the inferences made. There has been little dispute in this study in this regard. When all the information used during the review is taken as a whole, the resulting recommendation or inference tends to be believed valid by both the Regents' staff and the participating institution. The concurrence in the recommendation which is sought and in nearly all cases received would not be given if there were serious questions regarding validity. As is the case with the programs regarding which the review makes recommendations, the final judgment on the extent to which the five-year review meets the JCS standard for validity, must rest upon a preponderance of the evidence. Participant assessments of every other relevant standard suggest no significant problem in this regard.

The accuracy of the five-year review must be judged satisfactory, although opportunities for improving it exist and should be vigorously pursued.
CHAPTER VII
SUMMARY OF CONCLUSIONS
AND RECOMMENDATIONS

At the outset of this report, it was argued that state-level academic program review has become an increasingly evident fact of the academic life of higher education. Demands from the environment of higher education during the early 1970's for accountability for the public wealth devoted to higher education provided the earliest impetus to the initiation of program review, and anticipated environmental changes in the 1980's have made program review a strategic response to stable or decreasing resources available to higher education. Program review has been viewed, therefore, as a means of rationally reconsidering budgetary commitments with an eye toward maintaining institutional vitality and responsiveness to societal changes, and enhancing the quality of services provided, during an era in which the availability of new resources is unlikely. Program review is likely to change, therefore, from a reportorial exercise in accountability to an instrument of decision making of increasing centrality.

In view of this increasing centrality, the adequacy of current program review procedures require assessment. The Ohio Board of Regents has recognized the increasing importance of program review, and has been exerting leadership and sponsoring studies aimed toward stimulating program review at the institutional level, and expanding its own program review activities. Prior to doing so, however, it was viewed essential to investigate its only current program review procedure—the five-year review of technical associate degree programs—to determine its usefulness as a model and ascertain areas in which improvements in that process are required.

The development and publication of standards for evaluations of educational programs by evaluation professionals in 1981 provided a useful and professionally validated conceptual framework for such an investigation (JCS, 1981).
The Joint Committee on Standards identified 30 characteristics should exhibit satisfactorily if they are to be of optimal utility, feasibility, propriety, and accuracy. Of the 30 standards developed by the Joint Committee, 28 were shown to be applicable to the five-year review.

To assess the adequacy of the five-year review in reference to these standards, a jury of 37 professionals was selected. All jury members had either directly or indirectly been involved as participants in the five-year review or as consumers of its results. A summary of their assessments of the five-year review, and recommendations for changes emerging from their evaluation of the evaluation process, follow.

Conclusions and Recommendations Relative to Utility

Eight of the Joint Committee's standards are intended to ensure that evaluations will serve the practical information needs of given audiences. This study, therefore, posed as its first research question the following:

**R1** How useful do the participants in the five-year review of technical programs as conducted by the Ohio Board of Regents perceive the review to be?

To attain optimal utility, the Joint Committee suggested an evaluation exhibit the following characteristics:

1) Audiences involved in or affected by the evaluation should be identified so that their needs can be addressed.

2) The persons conducting the evaluation should be both trustworthy and competent to perform the evaluation so that their findings achieve maximum credibility and acceptance.

3) Information collected should be of such scope and selected in such ways as to address pertinent questions about the object of the evaluation and be responsive to the needs and interest of specified audiences.

4) The perspectives, procedures, and rationale used to interpret the findings should be carefully described, so that the bases for value judgments are clear.
5) The evaluation report should describe the object being evaluated and its context, and the purposes, procedures, and findings of the evaluation, so that the audiences will readily understand what was done, why it was done, what information was obtained, what conclusions were drawn, and what recommendations were made.

6) Evaluation findings should be disseminated to clients and other right-to-know audiences, so that they can assess and use the findings.

7) Release of reports should be timely, so that audiences can best use the reported information.

8) Evaluations should be planned and conducted in ways that encourage follow-through by members of the audiences (JCS, 1981, pp. 19-20).

Participants in this study were asked to indicate the extent to which they agreed that the five-year review satisfactorily exhibits the above characteristics. The aggregate ratings derived from their responses for each of these is reported in Table 43.

<table>
<thead>
<tr>
<th>Utility Standards</th>
<th>Aggregate Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audience Identification</td>
<td>3.91</td>
</tr>
<tr>
<td>Evaluator Credibility</td>
<td>3.36</td>
</tr>
<tr>
<td>Information Scope and Selection</td>
<td>2.99</td>
</tr>
<tr>
<td>Valuational Interpretation</td>
<td>3.18</td>
</tr>
<tr>
<td>Report Clarity</td>
<td>3.27</td>
</tr>
<tr>
<td>Report Dissemination</td>
<td>3.03</td>
</tr>
<tr>
<td>Report Timeliness</td>
<td>3.09</td>
</tr>
<tr>
<td>Evaluation Impact</td>
<td>2.83</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Satisfactory</th>
<th>Unsatisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>2.5</td>
</tr>
<tr>
<td>1.0</td>
<td></td>
</tr>
</tbody>
</table>
This study concluded that the five-year review has indeed satisfactorily (and appropriately) identified its audiences as the Ohio Board of Regents itself and the participating institution. There was no support for expanding the review's audience beyond these two.

This study also concluded that the Regents' personnel who have conducted the review are viewed as trustworthy and competent to conduct the review, but only within the limits of the manner in which the review has heretofore been conceived and conducted. The limitation is likely to become increasingly important. The review has not been perceived as directly addressing the issue of program quality. Considerable sentiment was expressed that to the extent that the review turns to address the issue of program quality more directly, the competence of the personnel drawing such conclusions will become subject to considerable doubt. There is clear evidence that the five-year review will increasingly address the question of program quality. These findings and conclusions, therefore, give rise to the first recommendation resulting from this study:

Recommendation 1: To the extent that the five-year review is to address the criterion of program quality, the review team currently consisting of Regents' staff personnel should be augmented by individuals possessing professional expertise in the specific programs the quality of which is under investigation.

This study revealed solid agreement that the information which has been used in the conduct of the five-year review is pertinent to the various designated criteria of duplication, need, quality, cost, and efficiency/productivity. This study concluded, however, that in regard to this standard, the most which can be said is that none of the information selected is irrelevant to the question it is intended to address. Concerns were expressed regarding both the scope and the selection of specific items of information used during the review. Advisory committee reports, although judged pertinent to their designated purpose, were judged of insufficient scope. The absence of specific financial information to be used in the assessment of cost and efficiency/productivity criteria was judged a critical deficiency. The
manner in which enrollments are defined in the enrollment reports used for a variety of purposes was judged questionable by a significant number of study participants, who suggested that alternative definitions would improve the usefulness of the enrollment reports as they are used for specified purposes in the review. Finally, the use of the report of degrees awarded for any purpose other than an assessment of continued adequacy of need or the possible impact of program duplication was criticized. The concerns expressed demonstrated that a number of opportunities exist to improve the five-year review with regard to the scope and selection of information it employs. The following recommendations arising from the above concerns can enhance the utility of the review:

Recommendation 2: The advisory committee reports currently used in the five-year review should be augmented or replaced by minutes of advisory committee meetings, and/or interviews or surveys of advisory committee members regarding the extent of their involvement in the operation of the programs subject to the review.

Recommendation 3: The information currently collected for the five-year review should be augmented with specific financial information to support conclusions with regard to the criteria of cost and efficiency/productivity.

Recommendation 4: In the assessment of program productivity, enrollment reports should change the definition of an enrollment unit from a student major to a student credit hour generated by enrollments in the courses comprising the program under review.

Recommendation 5: Care should be exercised in the use of the report of degrees awarded as an indicator of any criterion other than need and duplication, and then only in conjunction with other information.

On the basis of the findings of this study, it must be concluded that the Joint Committee's standard with regard to valuational interpretation is satisfactorily met. The procedures employed in the five-year review are clear, and the perspectives and rationale used to interpret its findings are clear and well understood. There is remarkable valuational
consonance between the institutions and the Regents with regard to eight of the 12 standards applied during the five-year review. Recommendations intended to address the valuational dissonance which was revealed by this study, however, are as follows:

Recommendation 6: The Ohio Board of Regents should reexamine its standards regarding the qualifications of technical faculty members, and consider reducing the number of years of work experience other than teaching from five years to three. Degree requirements should continue to be expressed as guidelines in Rule 3333-1-04, and should continue to be applied flexibly.

Recommendation 7: The Ohio Board of Regents should reexamine the enrollment standards applied during the review (15 freshmen and 12 sophomores), reassessing the extent to which it continues to believe that such numbers are the minimum it considers indicative of adequate need; considering expressing these standards in terms of student credit hours as they are used as indicators of cost and efficiency/productivity; and investigating the feasibility of setting different minimum enrollment expectations according to the differing cost characteristics of programs.

Recommendation 8: Full discussion of the appropriateness of the eight-graduate minimum standard should be initiated between the Regents and the institutions with an eye toward value clarification if not valuational consonance.

This study concluded that the release of the reports of the findings of the review have been sufficiently timely to achieve optimal utility of the review. The study also concluded that these reports have been sufficiently clear with regard to the review's purposes, procedures, and findings. The current distribution of the report was judged appropriate, but the study participants indicated that to enhance the usefulness of the review, the reports' dissemination should be expanded. A recommendation resulting from these findings suggests that:

Recommendation 9: Reports of the findings of the five-year review in full detail should be distributed to the chief instructional officers of the participating institutions as well as to the chief executive officers. Less detailed reports should be provided to other external and internal recipients as identified by study participants.
The findings of this study led to the conclusion that the absence of any regular follow-up procedure by the Regents' staff constituted a significant weakness in the five-year review's procedures. This deficiency results in inadequate regular assurance that the review has its intended impact. Despite this deficiency, this study investigated the extent to which the five-year review achieves its intended impacts and concluded that of the six impacts specifically stated as intentions, the review has significantly achieved those impacts of a quality enhancement nature, but has had ambiguous fiscal impact depending largely upon the specific institution involved. The study concluded that two intended impacts had not been achieved at all, and probably should be dropped as intentions. The recommendations arising from this investigation into the impact of the five-year review are as follows:

Recommendation 10: A regular follow-up procedure should be added to the five-year review process.

Recommendation 11: The Ohio Board of Regents should abandon announced intentions to use the review for the evaluation of capital budget requests and should abandon the hope that the review will effectively prevent more intrusive state action if circumstances become such as to make such intervention more likely than at present. The former intention is not feasible; the latter is not possible.

The findings of this study demonstrated that the five-year review has satisfactorily exhibited seven of the eight characteristics deemed essential for evaluation utility by the evaluation profession. Adoption of the above 11 recommendations would redress the one area judged deficient, and improve the review's performance in other areas. The five-year review is viewed as useful by the participants in the review. Opportunities exist, however, to enhance this usefulness.

Conclusions and Recommendations Relative to Feasibility and Propriety of Conduct

Three of the Joint Committee's standards are intended to ensure that an evaluation is realistic, prudent, diplomatic, and frugal. These
feasibility standards formed the parameters of the second research question posed at the outset of this study:

R2 How feasibly do the participants in the five-year review perceive the review to have been conducted?

To answer this question, this study assessed the five-year review with regard to the adequacy with which it meets the following feasibility standards of the Joint Committee:

1) The evaluation procedures should be practical, so that disruption is kept to a minimum, and that needed information can be obtained.

2) The evaluation should be planned and conducted with anticipation of the different positions of various interest groups, so that their cooperation may be obtained, and so that possible attempts by any of these groups to curtail evaluation operations or to bias or misapply the results can be averted or counteracted.

3) The evaluations should produce information of sufficient value to justify the resources expended (JCS, 1981, p. 51).

The aggregate ratings for the five-year review derived from the responses of the participants in this study with regard to these three standards are reported in Table 44. This study concluded that participants view the five-year review's procedures as practical, despite the finding that much of the information it uses duplicates information already submitted to the Board of Regents in other forms and for other purposes. Revisions in the Uniform Information System of the Board of Regents could eliminate this information duplication and thereby enhance the review's feasibility, but findings were not sufficiently conclusive to support a recommendation that this in fact be accomplished.
The inherent threats of political bias in the conduct of the five-year review appear to have been neutralized satisfactorily. This study did reveal the existence of some perception among university affiliated personnel that there is a bias against technical programs offered by university affiliated two-year campuses in the conduct of the five-year review. The perception was not particularly widespread, however, nor sufficiently strong to support a recommendation for remediation beyond simply making the Regents' staff aware of the existence of this perception.

There was no controversy with regard to the final feasibility standard. This study concluded that the five-year review produces information of sufficient value to justify the resources expended.

Because of the significant impact evaluations can have upon the lives of people, and because of the deadly impact insensitivity to human interactions can have upon the evaluation itself, the Joint Committee issued eight standards for the propriety of conduct of evaluations. Two of these standards were deemed inapplicable to the five-year review because of its "in-house" nature. The specific research question which addressed this issue was as follows:

**TABLE 44**

AGGREGATE RATINGS OF THE FIVE-YEAR REVIEW WITH REGARD TO THE FEASIBILITY STANDARD

<table>
<thead>
<tr>
<th>Feasibility Standard</th>
<th>Aggregate Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practical Procedures</td>
<td>2.95</td>
</tr>
<tr>
<td>Political Viability</td>
<td>3.03</td>
</tr>
<tr>
<td>Cost Effectiveness</td>
<td>3.34</td>
</tr>
</tbody>
</table>

Satisfactory | Unsatisfactory

| 4.0 | 2.5 | 1.0 |

...
Has the five-year review been conducted legally, ethically, and with due regard for the welfare of those involved in the evaluation, as well as those affected by its results?

The Committee's applicable standards for propriety are as follows:

1) Conflict of interest, frequently unavoidable, should be dealt with openly and honestly, so that it does not compromise the evaluation processes and results.

2) Oral and written evaluation reports should be open, direct, and honest in their disclosure of pertinent findings, including the limitations of the evaluation.

3) The formal parties to an evaluation should respect and assure the public's right to know, within the limits of other related principles and statutes, such as those dealing with public safety and the right to privacy.

4) Evaluations should be designed and conducted, so that the rights and welfare of the human subjects are respected and protected.

5) Evaluators should respect human dignity and worth in their interactions with other persons associated with an evaluation.

6) The evaluation should be complete and fair in its presentation of strengths and weaknesses of the object under investigation, so that strengths can be built upon and problem areas addressed (JCS, 1981, p. 63f.).

Respondents were asked to indicate the extent to which they agreed that the five-year review adequately meets these standards. The aggregate ratings derived from their responses are reported in Table 45.
TABLE 45
AGGREGATE RATINGS OF THE
FIVE-YEAR REVIEW WITH REGARD
TO THE PROPRIETY STANDARDS

<table>
<thead>
<tr>
<th>Propriety Standard</th>
<th>Aggregate Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conflict of Interest</td>
<td>3.43</td>
</tr>
<tr>
<td>Full and Frank Disclosure</td>
<td>3.24</td>
</tr>
<tr>
<td>Public's Right to Know</td>
<td>3.37</td>
</tr>
<tr>
<td>Rights of Human Subjects</td>
<td>3.42</td>
</tr>
<tr>
<td>Human Interactions</td>
<td>3.61</td>
</tr>
<tr>
<td>Balanced Reporting</td>
<td>3.11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Satisfactory</th>
<th>Unsatisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>2.5</td>
</tr>
<tr>
<td>1.0</td>
<td></td>
</tr>
</tbody>
</table>

Obviously, in no area has the propriety with which the five-year review been conducted been subject to doubt. This study concluded that there have been no conflicts of interest on the part of the Regents' personnel conducting the review. The reports have fully disclosed both the pertinent findings and limitations of the review, although the latter could be made more explicit in the report of findings. Reports have been satisfactorily balanced, adequately reporting both the strengths and weaknesses of the programs under review. The human dimensions of the propriety standards have been scrupulously observed. The public's right to know has been carefully balanced against the individual rights of institutional personnel participating in the review. The confidentiality of sensitive information has been protected, and the review has been conducted with an appropriate degree of respect for the human and professional dignity of the institutional personnel associated with the review.
The propriety of the conduct of the five-year review must be viewed as its strongest area of performance. There were no deficiencies cited and hence, no recommendations for remediation or improvement.

**Conclusions and Recommendations Relative to Accuracy**

Evaluations must reveal and convey technically accurate information about the features of the object being studied that determine its worth or merit. The fourth research question directing this inquiry, therefore, asked:

\[ \text{R}_4 \quad \text{How accurately do the participants in the review perceive the review to reveal and convey technically accurate information?} \]

Participants in this study were asked to indicate the extent to which they agreed that the five-year review satisfactorily meets the 11 standards the Joint Committee developed to ensure technical accuracy. These standards include:

1) The object of the evaluation (program, project, material) should be sufficiently examined, so that the form(s) of the object being considered in the evaluation can be clearly identified.

2) The context in which the program, project, or material exists should be examined in enough detail, so that its likely influences on the object can be identified.

3) The purposes and procedures of the evaluation should be monitored and described in enough detail, so that they can be identified and assessed.

4) The sources of information should be described in enough detail, so that the adequacy of the information can be assessed.

5) The information-gathering instruments and procedures should be chosen or developed and then implemented in ways that will assure that the interpretation arrived at is valid for the given use.

6) The information-gathering instruments and procedures should be chosen or developed and then implemented in ways that will assure that the information obtained is sufficiently reliable for the intended use.
7) The data collected, processed, and reported in an evaluation should be reviewed and corrected, so that the results of the evaluations will not be flawed.

8) Quantitative information in an evaluation should be appropriately and systematically analyzed to ensure supportable interpretations.

9) Qualitative information in an evaluation should be appropriately and systematically analyzed to ensure supportable interpretations.

10) The conclusions reached in an evaluation should be explicitly justified, so that the audiences can assess them.

11) The evaluation procedures should provide safeguards to protect the evaluation findings and reports against distortion by the personal feelings and biases of any party to the evaluation (JCS, 1981, pp. 97f.).

The ratings which were derived from participant responses to questions designed to assess the review's compliance with these standards are reported in Table 46. No rating was derived for the extent to which the review has clearly identified its object because participants were not asked to assess the review in this regard. This study relied upon documentary evidence for assessing the review on this standard and identified several open issues which should be addressed. The first of these is definitional. Currently, the five-year review examines only associate degree programs. It does not fully review, however, programs of lesser intensity associated with those programs, such as majors and one-year programs. Not doing so was found to be both illogical and potentially damaging. These conclusions, therefore, support the following recommendation:

Recommendation 12: The Regents' staff responsible for the five-year review should propose changes in policy and procedure necessary to identifying majors and one-year programs as appropriate objects of the five-year review's full investigation.
TABLE 46
AGGREGATE RATINGS OF THE FIVE-YEAR REVIEW WITH REGARD TO THE ACCURACY STANDARDS

<table>
<thead>
<tr>
<th>Accuracy Standard</th>
<th>Aggregate Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Object Identification</td>
<td>-</td>
</tr>
<tr>
<td>Context Analysis</td>
<td>3.10</td>
</tr>
<tr>
<td>Described Purposes and Procedures</td>
<td>3.31</td>
</tr>
<tr>
<td>Defensible Information Sources</td>
<td>3.22</td>
</tr>
<tr>
<td>Reliable Measurement</td>
<td>3.04</td>
</tr>
<tr>
<td>Valid Measurement</td>
<td>-</td>
</tr>
<tr>
<td>Systematic Data Control</td>
<td>3.38</td>
</tr>
<tr>
<td>Analysis of Quantitative Information</td>
<td>3.17</td>
</tr>
<tr>
<td>Analysis of Qualitative Information</td>
<td>3.30</td>
</tr>
<tr>
<td>Justified Conclusions</td>
<td>2.97</td>
</tr>
<tr>
<td>Objective Reporting</td>
<td>3.09</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Satisfactory</th>
<th>Unsatisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>2.5</td>
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</table>
Equally indefensible is the review's current limitation to technical associate degree programs. So to limit the Regents' review activities raises questions of both rationality and equity. Two recommendations, therefore, arise:

Recommendation 13: The Regents' staff responsible for the five-year review should open consultations with institutional personnel preparatory to building into the review's procedures a capacity to review pre-baccalaureate and general studies programs.

Recommendation 14: Recent efforts to expand the Regents' review activities to baccalaureate and graduate degree programs should be encouraged and intensified.

A final issue raised in connection with object identification relates to the selection mechanism and dimensional focus of the five-year review. This study concluded that while the current scheduled and vertical nature of the five-year review need not itself be disturbed, the Ohio Board of Regents can significantly expand its flexibility and focus by adding a triggered and lateral component to the review to run concurrent with the scheduled, vertical review. This conclusion suggests further investigation as follows:

Recommendation 15: The advisability and feasibility of adding a lateral review component to the current five-year review should be explored.

The second feasibility standard requires satisfactory analysis of the context within which a program operates if its evaluation is to be accurate. This study concluded that the five-year review has adequately taken into account the social, political, economic, and geographic contexts within which programs have operated. Several suggestions were made for generating information specifically useful for such an analysis, but the need to do so was not found to be sufficiently compelling to justify a recommendation to that effect.

Similarly, the findings of this study support the conclusion that the five-year review meets the Joint Committee's third accuracy standard. The review's purposes and procedures have been clearly described.
The sources of the information currently used during the five-year review were found to be both defensible and viewed as appropriate. There was no objection, however, to tapping information sources other than the institution itself should Regents' staff resources permit it and should the need for independent verification arise. Though sentiment was expressed that the review could be strengthened by seeking additional information sources, the conclusions of this study do not lead to such a recommendation.

The fifth accuracy standard requires reliable measurement. This study found that three of the six reports comprising the review's information package are sufficiently reliable for their purposes. The listings of electives, however, were found to be unnecessarily duplicative of the course inventories already supplied on an annual basis to the Regents' Management Information Office, a report which was found to be of greater accuracy. The findings, therefore, support a recommendation that:

Recommendation 16: The Regents' staff responsible for the conduct of the five-year review should examine the course inventories submitted to the Regents' Office of Management Information for the purposes of assessing curricular flexibility and possible overextension, and thereby obviate the special request for the listings of technical and non-technical electives currently included in the review's information package.

The reliability of advisory committee information was questioned, but adoption of the second recommendation above under information scope and selection should resolve reliability questions as well. The most significant problem with reliability, however, was found to attend the placement report, a critical outcome measure. There is little standardization among institutions in procedures, instrumentation, and definition of what constitutes placement related to technical training. Because of the importance of this information, these conclusions lead to a recommendation that:
Recommendation 17: The Regents' personnel responsible for the conduct of the five-year review should initiate consultations with institutional personnel responsible for the placement function with an objective of improving the reliability of the placement report.

The sixth accuracy standard of the Joint Committee requires valid measurement. This study was unable directly to assess the review's compliance with this standard, but did conclude on the basis of a preponderance of the evidence gathered throughout this study that the review satisfactorily meets the spirit, if not the letter, of this standard.

A requirement that the data collected for an evaluation be reviewed and corrected comprises the seventh accuracy standard. This study concluded that the review's procedures meet this standard. There was also little disagreement that the review's quantitative and qualitative information has been appropriately analyzed to ensure supportable interpretations, which finding supports the conclusions that the five-year review meets the eighth and ninth accuracy standards of the Joint Committee.

This study also concluded that the tenth accuracy standard calling for explicitly justified conclusions is adequately met by the review, and that the final standard requiring objective reporting has been adequately met in practice. With regard to objective reporting, however, it was found that while the review has heretofore been characterized by objective reporting, procedural safeguards against the emergence of biased reporting in the future are somewhat weak. Procedural safeguards would be strengthened by the expansion of the review team to include institutional personnel as suggested above by the first recommendation.
CONCLUSION

The findings and conclusions of this study demonstrate that the five-year review of technical associate degree programs as conducted by the Ohio Board of Regents has been useful, feasibly and properly conducted, and has generated technically accurate information. It has struck a careful balance between the interest of the state in accountability and the efficient use of public resources; the interest of state-assisted institutions of higher education in institutional autonomy as well as public accountability and responsiveness; and the interests of both in quality assurance. The five-year review has provided both the Ohio Board of Regents and postsecondary institutions with useful experience in one strategic response to the problems of academic and budgetary decision making in an environment of shrinking resources. The five-year review has demonstrated the effectiveness of program review as a coupling mechanism available to those seeking to exact leverage on the loosely coupled systems of postsecondary educational organizations without vitiating the advantages of loosely coupled systems. Indeed, program review is a means of preserving such systems. The five-year review is a process which warrants expansion to other academic levels within Ohio's higher education system and warrants consideration by other state-level coordinating agencies.

This study has also demonstrated the usefulness of the standards for evaluations recently developed by the Joint Committee on Standards as a conceptual and analytical framework for the conduct of meta-evaluations. This study has, therefore, responded to the call by the Joint Committee to apply these standards and to assess and report on the adequacy of the standards.

This study should have its intended impact upon the further development of the evaluation profession, the operations of the Ohio Board of Regents, the environment of higher education in Ohio, and the development of state-level program review in those states presently considering the development of such review processes.
Appendix A

SURVEY INSTRUMENT

Institutional Information:

A. INSTITUTIONAL TYPE (check one):
   a) Community College  
   b) Technical College  
   c) University Affiliate

B. YEAR OF REVIEW:
   a) 1980-1981  
   b) 1979-1980  
   c) 1978-1979

C. NUMBER OF TECHNICAL ASSOCIATE DEGREE PROGRAMS OFFERED
   a) 1 - 5  
   b) 6 - 10  
   c) 11 - 15  
   d) over 15

In response to the following items, circle the letters which indicate the extent to which you agree with the statement: SA - strongly agree; A - agree; D - disagree; SD - strongly disagree; NBJ - no basis for judgment. Comments are invited, but not required.

A. Purposes, Procedures, and Audience

   The first three questions relate to the clarity of the purposes and procedures of the five-year review, and the appropriateness of the audience of the review. Indicate the extent of your agreement with the following statements by stating whether you strongly agree, agree, disagree, or strongly disagree:

1. The purposes of the five-year review are clear to me. SA A D SD NBJ

   Comments: ____________________________________________________________

   ___________________________________________________________________

   ___________________________________________________________________

   ___________________________________________________________________

   ___________________________________________________________________

2. The procedures employed in the conduct of the five-year review are clear to me. SA A D SD NBJ

   Comments: ____________________________________________________________

   ___________________________________________________________________

   ___________________________________________________________________

   ___________________________________________________________________

   ___________________________________________________________________
3. The Board of Regents is one audience for the findings of the five-year review. Do you strongly agree, agree, disagree, strongly disagree that the following are also an appropriate audience for the findings of the five-year review.

a) the participating institution
b) all other institutions
c) the Legislative Budget Office
d) the Office of Budget Management

Comments:

B. Pertinence of Information Requested

One of the concerns frequently raised regarding evaluations is that the information requested from the institution does not really address the question it intended to speak to. For example, the number of volumes in the library may or may not be pertinent to the question of program quality. I am going to give you first a description of the information we request from you, and then the review criteria the information could possibly be used for. Setting aside for a moment issues of validity, accuracy, or acceptability of the standards this information refers to, indicate the extent to which you agree that the specific item of information requested is relevant to the issue it is intended to address:

1. One item we ask for is a program inventory listing all your programs. Do you strongly agree, agree, disagree, strongly disagree that this listing is relevant to the issue of program duplication?

Comments:
2. The second item we ask for is a summary and classification of courses comprising each program offered, as on the attached example. Indicate the extent to which you agree that this information is relevant to the following questions.

a) compliance with Regents rules and standards  
SA A D SD NBJ

b) program quality  
SA A D SD NBJ

Comments: ____________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

3. We also ask you to provide a listing of technical, basic and non-technical electives available in each program as on the attached example. Indicate the extent to which you agree or disagree that this information is pertinent to the following issues:

a) compliance with Regents' rules and standards  
SA A D SD NBJ

b) program quality  
SA A D SD NBJ

Comments: ____________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

4. We also ask for the credentials of your full-time technical faculty, both their academic and professional non-teaching experience. Indicate the extent to which you agree that this information is pertinent to the question of

a) compliance with Regents' rules and standards  
SA A D SD NBJ

b) program quality  
SA A D SD NBJ

Comments: ____________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________
5. We also ask for a report listing the names and addresses of each program advisory committee member, and the number of meetings held in the previous year. Indicate the extent to which you agree that this information is pertinent to the question of:

a) compliance with Regents' rules and standards
b) program quality

Comments: ____________________________________________________________________

6. We also ask for a report of freshman and sophomore enrollments in each program for the previous five years. Indicate the extent to which you agree that this information is pertinent to the question of:

a) program quality
b) continued need for program
c) productivity or efficiency
d) program duplication
e) program cost

Comments: ____________________________________________________________________

7. We also ask you to report the annual number of graduates from a program over the previous five year period. Indicate the extent to which you agree that this information is pertinent to the question of:

a) continued need for program
b) efficiency or productivity
c) program duplication
d) program cost

Comments: ____________________________________________________________________
8. Finally, institutions are asked to provide reports of the placement of graduates in jobs related to their training. Indicate the extent to which you agree that this information is pertinent to the question of:

a) program quality  
SA A D SD NBJ
b) program duplication  
SA A D SD NBJ
c) program efficiency or productivity  
SA A D SD NBJ
d) continued need for program  
SA A D SD NBJ

Comments: ____________________________ ______________________________

C. Information Accuracy and Source

1. Reliability of information is important to good evaluation. Indicate the extent to which you agree that the following sources yield accurate information, i.e., reliably consistent across time within your institution and reliably consistent across all institutions participating in the review.

a) program summary, (or summary and classification of courses): Form II  
SA A D SD NBJ
b) technical electives: Form III  
SA A D SD NBJ
c) faculty credentials: Form IV  
SA A D SD NBJ
d) advisory committees: Form V  
SA A D SD NBJ
e) enrollments: Form VI  
SA A D SD NBJ
f) placement: Form VII  
SA A D SD NBJ

Comments: ____________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________

2. Currently, all information used in the review is requested from the institution itself. Other information sources could include accreditation associations, students, advisory committee members, graduates, etc. Indicate the extent to which you agree that our reliance upon the institution to provide all the information used during the review is both clear and appropriate.

Comments: __________________________________________________

3. Indicate the extent to which you agree or disagree that information requested for the review does not duplicate information previously requested by the Regents.

Comments:  ____________________________________________________________________

D. Validity

The validity of evaluations depends largely upon whether the information is sufficient to justify the conclusions reached. I am going to give you a number of preliminary or prima facie conclusions drawn upon the basis of information provided on the forms used in the five-year review. Assuming that a subsequent opportunity is provided to refute the conclusions drawn, indicate the extent to which you agree or disagree that a prima facie conclusion can be validly drawn from the information specified:

1. The information provided regarding the summary and classification of courses is sufficient to justify a prima facie conclusion concerning compliance with the curriculum standards contained in Rule 3333-1-04.

Comments: __________________________________________________________________
2. The information provided regarding technical electives is sufficient to justify a *prima facie* conclusion concerning the extent to which the institution provides curricular flexibility.  

Comments: ____________________________________________________________________

SA A D SD NBJ

3. The information provided regarding technical electives is sufficient to justify a *prima facie* conclusion concerning the extent to which the institution may be over-extending its curriculum.  

Comments: ____________________________________________________________________

SA A D SD NBJ

4. The information provided regarding faculty credentials is sufficient to justify a *prima facie* conclusion concerning general institutional compliance with the technical faculty credentials standards contained in Rule 3333-1-04.  

Comments: ____________________________________________________________________

SA A D SD NBJ
5. The information provided regarding advisory committees is sufficient to justify a *prima facie* conclusion concerning the utilization of advisory committees. 

Comments: 

6. The information provided regarding enrollments is sufficient to justify *prima facie* conclusions concerning the adequacy of enrollments with regard to *program cost* and income generated (or efficiency).

Comments: 

7. The information provided regarding enrollments is sufficient to justify *prima facie* conclusions concerning the adequacy of enrollments with regard to *program need*.

Comments:
8. The information provided regarding enrollments is sufficient to justify *prima facie* conclusions concerning the adequacy of enrollments with regard to program attrition.

Consents: _____________________________________________________________

Comments: ____________________________________________________________

9. The information provided regarding placement is sufficient to justify *prima facie* conclusions concerning *program effectiveness*.

Consents: _____________________________________________________________

Comments: ____________________________________________________________

10. The information provided regarding placement is sufficient to justify *prima facie* conclusions concerning *program productivity* (or efficiency).

Consents: ____________________________________________________________

Comments: ____________________________________________________________
E. Standards

A number of standards are used during the five-year review against which programs are assessed. I will give you the standard, and then ask you the extent to which you agree or disagree that the standard is first clear, well understood, and then second, whether you agree or disagree that the standard is appropriate for technical associate degree programs.

1. Programs shall contain a minimum of 45 quarter credit hours in technical studies.
   a) the standard is clear and understood
   b) the standard is appropriate for technical associate degree programs.

   Comments: ___________________________________________________________________

2. Programs shall contain a minimum of 21 quarter credit hours in basic/related studies.
   a) the standard is clear and understood
   b) the standard is appropriate for technical associate degree programs.

   Comments: ___________________________________________________________________

3. Programs shall contain a minimum of 21 quarter credit hours in general studies.
   a) the standard is clear and understood
   b) the standard is appropriate for technical associate degree programs.

   Comments: ___________________________________________________________________
4. Programs shall contain a minimum of 90 quarter credit hours and a maximum of 110 quarter credit hours required for the degree.
   a) the standard is clear and understood
   b) the standard is appropriate for technical associate degree programs.

   Comments: 

5. Programs shall afford students and the institution with curricular flexibility as represented by the availability of technical elective opportunities.
   a) the standard is clear and understood
   b) the standard is appropriate for technical associate degree programs.

   Comments: 

6. Each program shall have an advisory committee which meets at least twice annually.
   a) the standard is clear and understood
   b) the standard is appropriate for technical associate degree programs.
7. Programs should enroll a minimum average of fifteen freshman students annually.
   a) the standard is clear and understood
   b) the standard is appropriate for technical associate degree programs.

Comments:____________________________________________________________________

8. Programs should enroll a minimum average of twelve sophomore students annually.
   a) the standard is clear and understood
   b) the standard is appropriate for technical associate degree programs.

Comments:____________________________________________________________________

9. Programs should graduate a minimum average of eight students annually after the fourth year of its operation.
   a) the standard is clear and understood
   b) the standard is appropriate for technical associate degree programs.

Comments:____________________________________________________________________
10. A minimum annual average of 75% of a program's graduates shall be placed in jobs related to their training.
   a) the standard is clear and understood
   b) the standard is appropriate for technical associate degree programs.

Comments: ____________________________________________________________

11. Each program shall have at least one full-time faculty member to provide leadership to the program.
   a) the standard is clear and understood
   b) the standard is appropriate for technical associate degree programs.

Comments: ____________________________________________________________

12. Each technical faculty member should have a minimum of a baccalaureate degree, preferably a masters degree, and possess a minimum of five years of experience other than teaching in the technology for which he/she is responsible or a closely related field.
   a) the standard is clear and understood
   b) the standard is appropriate for technical associate degree programs.

Comments: ____________________________________________________________
F. Analysis of Information

The sixth area in which I will ask you to assess the five-year review pertains to how appropriately you believe the information provided by your institution is analyzed. Indicate the extent to which you agree or disagree with the following statements.

1. The quantitative information provided by my institution for the five-year review was appropriately analyzed to ensure supportable interpretations.  
Comments: __________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
2. I was provided ample opportunity to review and correct, if necessary, the data collected, processed, and reported by the Regents personnel conducting the review.  
Comments: __________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
3. The qualitative information (discussion during the site visit and explanations contained in my letter of response) was appropriately analyzed to ensure supportable interpretation.  
Comments: __________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
4. In reviewing the programs at my institution, Regents' personnel sufficiently took into account the social, economic, political, and geographic context within which my institution operates.

Comments: ____________________________________________________________

G. Report of the Findings

At the conclusion of the five-year review the staff conducting the review have provided both you and the Board with oral and written reports of the findings of the five-year review. The following seven questions ask you to assess these final reports. Indicate the extent to which you agree or disagree with the following statements:

1. The final report of the five-year review was clear in regard to the review's:

   a) procedures
   b) rationale
   c) findings
   d) recommendations

Comments: ____________________________________________________________

2. The oral and written reports of the five-year review have been open, direct, and honest in their disclosure of pertinent findings.

Comments: ____________________________________________________________
3. The oral and written reports of the five-year review have been open, direct, and honest in their disclosure of limitations of the evaluation.

Comments: ______________________________________________________________

4. The report of the five-year review is complete and fair in its presentation of the strengths and weaknesses of the programs under review.

Comments: ______________________________________________________________

5. The conclusions contained in the final report of the five-year review were explicitly justified.

Comments: ______________________________________________________________

6. Reports are released at such a time as to make findings useful.

Comments: ______________________________________________________________
7. Currently, the final report of the five-year review is distributed to the members of the Board of Regents, the Administration of the Board, the chief administrative officer of the participant institution, and the provost when appropriate. This distribution is appropriate. Comments: ___________________________________________________________________

H. Propriety of Conduct

The eighth area of investigation for the five-year review deals with the propriety with which the review is conducted. It is the area which contains probably the most sensitive questions and one which will require your most candid responses. I again assure you can be completely candid in replying to these questions and assure you your responses will be kept entirely anonymous. Please indicate the extent to which you agree or disagree with the following statements:

1. I have perceived no political bias (in favor of one institution over another, or type of institution over another) in the conduct or interpretation of findings of the five-year review. Comments: ___________________________________________________________________

2. I am aware of no conflict of interest on the part of the Regents' personnel conducting the review. Comments: ___________________________________________________________________
3. The public's "right to know" is appropriately balanced with respect for the individual rights of faculty and institutional administrators.

4. The five-year review procedures provided adequate safeguards against distortion of the findings by the personal feelings and biases of any party to the evaluation.

5. The personnel conducting the review protected and assured the confidentiality of any sensitive information I may have supplied them.
6. In conducting the five-year review, Regents' personnel demonstrated an appropriate degree of respect for the human dignity and worth of the institutional personnel associated with the review.

Comments: 

______________________________________________________________________________________

______________________________________________________________________________________

______________________________________________________________________________________

______________________________________________________________________________________

7. The conduct of the five-year review was minimally disruptive of the normal operation of my institution.

Comments: 

______________________________________________________________________________________

______________________________________________________________________________________

______________________________________________________________________________________

______________________________________________________________________________________

8. I would characterize the cooperation of my institution as full, complete, and in good faith.

Comments: 

______________________________________________________________________________________

______________________________________________________________________________________

______________________________________________________________________________________

______________________________________________________________________________________

9. As the five-year review is currently conceived and conducted, I believe the personnel conducting the review are competent to do so.

Comments: 

______________________________________________________________________________________

______________________________________________________________________________________

______________________________________________________________________________________

______________________________________________________________________________________
I. Impact

The final area of concern in the five-year review relates to the impact of the review. I will read to you a number of intended impacts. Indicate the extent to which you agree or disagree that the following impacts actually occurred within your institution. Again feel free to ask for any clarification of any item.

1. Either in anticipation or as a result of it, the five-year review process helped spark a revitalization of commitment to the success of a particular program offered by my institution.  
   Comments: ____________________________________________________________
   SA A D SD NBJ

2. Either in anticipation or as a result of it, the five-year review process helped my institution free resources consumed by weaker programs for reallocation to new areas of need and opportunities where the potential for success was greater.  
   Comments: ____________________________________________________________
   SA A D SD NBJ

3. Either in anticipation or as a result of it, the five-year review process helped my institution free resources consumed by weaker programs for reallocation to stronger ones.  
   Comments: ____________________________________________________________
   SA A D SD NBJ
4. The five-year review process provided my institution with useful or helpful suggestions.

Comments: ____________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

5. There is adequate follow-up on the findings of the five-year review.

Comments: ____________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

6. I believe that the conduct of the five-year review helps reassure the public and its representatives that the resources devoted to technical education constitute money well spent, enhancing the possibility that public confidence and public support of technical education will continue.

Comments: ____________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

7. I believe that if the Regents were not to conduct this review, another non-educational state agency probably would.

Comments: ____________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Based upon a fair estimate of the direct costs of the five-year review to my institution, I believe the information produced by the review was of sufficient value to justify the resources expended.

Comments: ____________________________________________________________________

The final two questions are open questions.

1. What do you believe should be added to the five-year review which it currently lacks?

   ____________________________________________________________________

2. Do you have any additional comments regarding the five-year review?

   ____________________________________________________________________
Appendix B

INTERVIEW SCHEDULE

CHIEF EXECUTIVE OFFICERS And
REGENTS ADMINISTRATIVE STAFF

I shall be asking you a number of questions regarding the five-year review. The questions fall into nine areas of inquiry, all of which are intended to assess the five-year review with regard to its usefulness, feasibility, accuracy, and the propriety of its conduct. It would be helpful if you were to respond initially with an answer indicating whether you strongly agree, agree, disagree, or strongly disagree with the statement I shall read to you. Feel free to ask for clarification of any question, and to add any additional comments or qualification you may wish to make to your initial response. If after clarification you still have no basis for judgment in responding to an item, feel completely free to say so.

Please be completely candid. Your responses will be kept strictly confidential.

A. Purposes, Procedures, and Audience

The first three questions relate to the clarity of the purposes and procedures of the five-year review, and the appropriateness of the audience of the review. Indicate the extent of your agreement with the following statements by stating whether you strongly agree, agree, disagree, or strongly disagree:

1. The purposes of the five-year review are clear to me. SA A D SD NBJ
   Comments: __________________________________________
   ______________________________________________________
   ______________________________________________________
   ______________________________________________________

2. The procedures employed in the conduct of the five-year review are clear to me. SA A D SD NBJ
   Comments: __________________________________________
   ______________________________________________________
   ______________________________________________________
   ______________________________________________________
3. The Board of Regents is one audience for the findings of the five-year review. Do you strongly agree, agree, disagree, strongly disagree that the following are also an appropriate audience for the findings of the five-year review.

a) the participating institution
b) all other institutions
c) the Legislative Budget Office
d) the Office of Budget Management

Comments:

B. Pertinence of Information Requested

One of the concerns frequently raised regarding evaluations is that the information requested from the institution does not really address the question it is intended to speak to. For example, the number of volumes in the library may or may not be pertinent to the question of program quality. I am going to give you first a description of the information we request from you, and then the review criteria the information could possibly be used for. Setting aside for a moment issues of validity, accuracy, or acceptability of the standards this information refers to, indicate the extent to which you agree that the specific item of information requested is relevant to the issue it is intended to address:

1. One item we ask for is a program inventory listing all your programs. Do you strongly agree, agree, disagree, strongly disagree that this listing is relevant to the issue of program duplication?

Comments:
2. The second item we ask for is a summary and classification of courses comprising each program offered, as on the attached example. Indicate the extent to which you agree that this information is relevant to the following questions.

a) compliance with Regents rules and standards
b) program quality

Comments: ____________________________________________________________________

3. We also ask you to provide a listing of technical, basic and non-technical electives available in each program as on the attached example. Indicate the extent to which you agree or disagree that this information is pertinent to the following issues:

a) compliance with Regents' rules and standards
b) program quality

Comments: ____________________________________________________________________

4. We also ask for the credentials of your full-time technical faculty, both their academic and professional non-teaching experience. Indicate the extent to which you agree that this information is pertinent to the question of

a) compliance with Regents' rules and standards
b) program quality

Comments: ____________________________________________________________________
5. We also ask for a report listing the names and addresses of each program advisory committee member, and the number of meetings held in the previous year. Indicate the extent to which you agree that this information is pertinent to the question of:

a) compliance with Regents' rules and standards  
   SA A D SD NBJ

b) program quality  
   SA A D SD NBJ

Comments: ____________________________________________________________

6. We also ask for a report of freshman and sophomore enrollments in each program for the previous five years. Indicate the extent to which you agree that this information is pertinent to the question of:

a) program quality  
   SA A D SD NBJ

b) continued need for program  
   SA A D SD NBJ

c) productivity or efficiency  
   SA A D SD NBJ

d) program duplication  
   SA A D SD NBJ

e) program cost  
   SA A D SD NBJ

Comments: ____________________________________________________________

7. We also ask you to report the annual number of graduates from a program over the previous five year period. Indicate the extent to which you agree that this information is pertinent to the question of:

a) continued need for program  
   SA A D SD NBJ

b) efficiency or productivity  
   SA A D SD NBJ

c) program duplication  
   SA A D SD NBJ

d) program cost  
   SA A D SD NBJ

Comments: ____________________________________________________________
8. Finally, institutions are asked to provide reports of the placement of graduates in jobs related to their training. Indicate the extent to which you agree that this information is pertinent to the question of:

   a) program quality
   b) program duplication
   c) program efficiency or productivity
   d) continued need for program

Comments: ________________________________

   ________________________________

   ________________________________

   ________________________________

C. Information Accuracy and Source

1. Reliability of information is important to good evaluation. Indicate the extent to which you agree that the following sources yield accurate information, i.e., reliably consistent across time within your institution and reliably consistent across all institutions participating in the review.

   a) program summary, (or summary and classification of courses): Form II
   b) technical electives: Form III
   c) faculty credentials: Form IV
   d) advisory committees: Form V
   e) enrollments: Form VI
   f) placement: Form VII

Comments: ________________________________

   ________________________________

   ________________________________

   ________________________________
2. Currently, all information used in the review is requested from the institution itself. Other information sources could include accreditation associations, students, advisory committee members, graduates, etc. Indicate the extent to which you agree that our reliance upon the institution to provide all the information used during the review is both clear and appropriate.  

Comments: ____________________________________________________________________  

SA A D SD NBJ

3. Indicate the extent to which you agree or disagree that information requested for the review does not duplicate information previously requested by the Regents.  

Comments: ____________________________________________________________________  

SA A D SD NBJ

D. Validity

The validity of evaluations depends largely upon whether the information is sufficient to justify the conclusions reached. I am going to give you a number of preliminary or prima facie conclusions drawn upon the basis of information provided on the forms used in the five-year review. Assuming that a subsequent opportunity is provided to refute the conclusions drawn, indicate the extent to which you agree or disagree that a prima facie conclusion can be validly drawn from the information specified:

1. The information provided regarding the summary and classification of courses is sufficient to justify a prima facie conclusion concerning compliance with the curriculum standards contained in Rule 3333-1-04.  

Comments: ____________________________________________________________________  

SA A D SD NBJ
2. The information provided regarding technical electives is sufficient to justify a *prima facie* conclusion concerning the extent to which the institution provides curricular flexibility.

Comments: ____________________________________________________________
___________________________________________________________
___________________________________________________________
___________________________________________________________
___________________________________________________________
___________________________________________________________

3. The information provided regarding technical electives is sufficient to justify a *prima facie* conclusion concerning the extent to which the institution may be over-extending its curriculum.

Comments: ____________________________________________________________
___________________________________________________________
___________________________________________________________
___________________________________________________________
___________________________________________________________
___________________________________________________________

4. The information provided regarding faculty credentials is sufficient to justify a *prima facie* conclusion concerning general institutional compliance with the technical faculty credentials standards contained in Rule 3333-1-04.

Comments: ____________________________________________________________
___________________________________________________________
___________________________________________________________
___________________________________________________________
___________________________________________________________
___________________________________________________________
5. The information provided regarding advisory committees is sufficient to justify a *prima facie* conclusion concerning the utilization of advisory committees.

Comments: 

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

6. The information provided regarding enrollments is sufficient to justify *prima facie* conclusions concerning the adequacy of enrollments with regard to program cost and income generated (or efficiency).

Comments: 

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

7. The information provided regarding enrollments is sufficient to justify *prima facie* conclusions concerning the adequacy of enrollments with regard to program need.

Comments: 

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
8. The information provided regarding enrollments is sufficient to justify prima facie conclusions concerning the adequacy of enrollments with regard to program attrition. SA A D SD NBJ

Comments: ____________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

9. The information provided regarding placement is sufficient to justify prima facie conclusions concerning program effectiveness. SA A D SD NBJ

Comments: ____________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

10. The information provided regarding placement is sufficient to justify prima facie conclusions concerning program productivity (or efficiency). SA A D SD NBJ

Comments: ____________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
E. Standards

A number of standards are used during the five-year review against which programs are assessed. I will give you the standard, and then ask you the extent to which you agree or disagree that the standard is first clear, well understood, and then second, whether you agree or disagree that the standard is appropriate for technical associate degree programs.

1. Programs shall contain a minimum of 45 quarter credit hours in technical studies.
   a) the standard is clear and understood  
      SA A D SD NBJ
   b) the standard is appropriate for technical associate degree programs.  
      SA A D SD NBJ

   Comments: _________________________________________________________________


2. Programs shall contain a minimum of 21 quarter credit hours in basic/related studies.
   a) the standard is clear and understood  
      SA A D SD NBJ
   b) the standard is appropriate for technical associate degree programs.  
      SA A D SD NBJ

   Comments: _________________________________________________________________


3. Programs shall contain a minimum of 21 quarter credit hours in general studies.
   a) the standard is clear and understood  
      SA A D SD NBJ
   b) the standard is appropriate for technical associate degree programs.  
      SA A D SD NBJ

   Comments: _________________________________________________________________


4. Programs shall contain a minimum of 90 quarter credit hours and a maximum of 110 quarter credit hours required for the degree.
   a) the standard is clear and understood
   b) the standard is appropriate for technical associate degree programs.

Comments: ____________________________________________________________________

5. Programs shall afford students and the institution with curricular flexibility as represented by the availability of technical elective opportunities.
   a) the standard is clear and understood
   b) the standard is appropriate for technical associate degree programs.

Comments: ____________________________________________________________________

6. Each program shall have an advisory committee which meets at least twice annually.
   a) the standard is clear and understood
   b) the standard is appropriate for technical associate degree programs.

Comments: ____________________________________________________________________
7. Programs should enroll a minimum average of fifteen freshman students annually.
   a) the standard is clear and understood
   b) the standard is appropriate for technical associate degree programs.

Comments: ______________________________________________

8. Programs should enroll a minimum average of twelve sophomore students annually.
   a) the standard is clear and understood
   b) the standard is appropriate for technical associate degree programs.

Comments: ______________________________________________

9. Programs should graduate a minimum average of eight students annually after the fourth year of its operation.
   a) the standard is clear and understood
   b) the standard is appropriate for technical associate degree programs.

Comments: ______________________________________________
10. A minimum annual average of 75% of a program's graduates shall be placed in jobs related to their training.
   a) the standard is clear and understood
   b) the standard is appropriate for technical associate degree programs.
   Comments: ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

11. Each program shall have at least one full-time faculty member to provide leadership to the program.
   a) the standard is clear and understood
   b) the standard is appropriate for technical associate degree programs.
   Comments: ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

12. Each technical faculty member should have a minimum of a baccalaureate degree, preferably a masters degree, and possess a minimum of five years of experience other than teaching in the technology for which he/she is responsible or a closely related field.
   a) the standard is clear and understood
   b) the standard is appropriate for technical associate degree programs.
   Comments: ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________
F. Analysis of Information

The sixth area in which I will ask you to assess the five-year review pertains to how appropriately you believe the information provided by your institution is analyzed. Indicate the extent to which you agree or disagree with the following statements.

1. The quantitative information provided by my institution for the five-year review was appropriately analyzed to ensure supportable interpretations.  

   Comments: ____________________________________________________________

   SA A D SD NBJ

2. I was provided ample opportunity to review and correct, if necessary, the data collected, processed, and reported by the Regents personnel conducting the review.

   Comments: ____________________________________________________________

   SA A D SD NBJ

3. The qualitative information (discussion during the site visit and explanations contained in my letter of response) was appropriately analyzed to ensure supportable interpretations.  

   Comments: ____________________________________________________________

   SA A D SD NBJ
4. In reviewing the programs at my institution, Regents' personnel sufficiently took into account the social, economic, political, and geographic context within which my institution operates. SA A D SD NBJ

Comments: ________________________________________________________________

G. Report of the Findings

At the conclusion of the five-year review the staff conducting the review have provided both you and the Board with oral and written reports of the findings of the five-year review. The following seven questions ask you to assess these final reports. Indicate the extent to which you agree or disagree with the following statements:

1. The final report of the five-year review was clear in regard to the review's:
   a) procedures SA A D SD NBJ
   b) rationale SA A D SD NBJ
   c) findings SA A D SD NBJ
   d) recommendations SA A D SD NBJ

Comments: ________________________________________________________________

2. The oral and written reports of the five-year review have been open, direct, and honest in their disclosure of pertinent findings. SA A D SD NBJ

Comments: ________________________________________________________________
3. The oral and written reports of the five-year review have been open, direct, and honest in their disclosure of limitations of the evaluation.

Comments: 


4. The report of the five-year review is complete and fair in its presentation of the strengths and weaknesses of the programs under review.

Comments: 


5. The conclusions contained in the final report of the five-year review were explicitly justified.

Comments: 


6. Reports are released at such a time as to make findings useful.

Comments: 


7. Currently, the final report of the five-year review is distributed to the members of the Board of Regents, the Administration of the Board, the Chief Administrative Officer of the participant institution, and the provost when appropriate. This distribution is appropriate. 

Comments: ________________________________________________________________
______________________________________________________________
______________________________________________________________
______________________________________________________________
______________________________________________________________

H. Propriety of Conduct

The eighth area of investigation for the five-year review deals with the propriety with which the review is conducted. It is the area which contains probably the most sensitive questions and one which will require your most candid responses. I again assure you can be completely candid in replying to these questions and assure you your responses will be kept entirely anonymous. Please indicate the extent to which you agree or disagree with the following statements:

1. I have perceived no political bias (in favor of one institution over another, or type of institution over another) in the conduct or interpretation of findings of the five-year review. 

Comments: ________________________________________________________________
______________________________________________________________
______________________________________________________________
______________________________________________________________
______________________________________________________________

2. I am aware of no conflict of interest on the part of the Regents' personnel conducting the review.

Comments: ________________________________________________________________
______________________________________________________________
______________________________________________________________
______________________________________________________________
______________________________________________________________
3. The public's "right to know" is appropriately balanced with respect for the individual rights of faculty and institutional administrators.

Comments: 

____________________________________________________________________

4. The five-year review procedures provided adequate safeguards against distortion of the findings by the personal feelings and biases of any party to the evaluation.

Comments: 

____________________________________________________________________

5. The personnel conducting the review protected and assured the confidentiality of any sensitive information I may have supplied them.

Comments: 

____________________________________________________________________
6. In conducting the five-year review, Regents' personnel demonstrated an appropriate degree of respect for the human dignity and worth of the institutional personnel associated with the review.

Comments: 


7. The conduct of the five-year review was minimally disruptive of the normal operation of my institution.

Comments: 


8. I would characterize the cooperation of my institution as full, complete, and in good faith.

Comments: 


9. As the five-year review is currently conceived and conducted, I believe the personnel conducting the review are competent to do so.

Comments: 


I. Impact

The final area of concern in the five-year review relates to the impact of the review. I will read to you a number of intended impacts. Indicate the extent to which you agree or disagree that the following impacts actually occurred within your institution. Again feel free to ask for any clarification of any item.

1. Either in anticipation or as a result of it, the five-year review process helped spark a revitalization of commitment to the success of a particular program offered by my institution.  

Comments: ____________________________

2. Either in anticipation or as a result of it, the five-year review process helped my institution free resources consumed by weaker programs for reallocation to new areas of need and opportunities where the potential for success was greater.

Comments: ____________________________

3. Either in anticipation or as a result of it, the five-year review process helped my institution free resources consumed by weaker programs for reallocation to stronger ones.

Comments: ____________________________
4. The five-year review process provided my institution with useful or helpful suggestions.

Comments: __________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

5. There is adequate follow-up on the findings of the five-year review.

Comments: _______________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

6. I believe that the conduct of the five-year review helps reassure the public and its representatives that the resources devoted to technical education constitute money well spent, enhancing the possibility that public confidence and public support of technical education will continue.

Comments: ________________________ _______________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________

7. I believe that if the Regents were not to conduct this review, another non-educational state agency probably would.

Comments: ________________________ _______________________________________

_____________________________________________________________________

_____________________________________________________________________

_____________________________________________________________________
8. Based upon a fair estimate of the direct costs of the five-year review to my institution, I believe the information produced by the review was of sufficient value to justify the resources expended.

Comments:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

J. The final two questions are open questions.

1. What do you believe should be added to the five-year review which it currently lacks?
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

2. Do you have any additional comments regarding the five-year review?
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
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Columbus: Ohio Board of Regents, 1980.

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