

Measuring Organizational Effectiveness in Institutions of Higher Education

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This study examines the concept of organizational effectiveness in institutions of higher education. Some obstacles to the assessment of organizational effectiveness in higher education are discussed, namely criteria problems and the unique organizational attributes of colleges and universities, and criteria choices addressing these issues are outlined. Criteria were generated from dominant coalition members in six institutions, and nine dimensions of organizational effectiveness were derived. Reliability and validity of the dimensions were tested, and evidence was found for certain patterns of effectiveness across the nine dimensions. •

For the past 50 years, organizational researchers have been concerned with the "effectiveness" of organizations, yet confusion persists regarding what organizational effectiveness is. It has rarely been possible to compare studies of effectiveness, since few have used common criteria for indicating effectiveness (Campbell, 1973; Steers, 1975), and effectiveness has been a label pinned on a wide variety of organizational phenomena from a wide variety of perspectives. Difficulty in empirically assessing organizational effectiveness has arisen because no one ultimate criterion of effectiveness exists. Instead, organizations may pursue multiple and often contradictory goals (Warner, 1967; Perrow, 1970; Hall, 1972, 1978; Dubin, 1976), relevant effectiveness criteria may change over the life cycle of an organization (Yuchtman and Seashore, 1967; Kimberly, 1976; Miles and Cameron, 1977), different constituencies may have particular importance at one time or with regard to certain organizational aspects and not others (Friedlander and Pickle, 1968, Scott, 1977; Barney, 1978), criteria at one organizational level may not be the same as those at another organizational level (Price, 1972; Weick, 1977), and the relationships among various effectiveness dimensions may be difficult to discover (Seashore, Indik, and Georgopolous, 1960; Mahoney and Weitzel, 1969; Kirchhoff, 1975). In short, organizational effectiveness may be typified as being mutable (composed of different criteria at different life stages), comprehensive (including a multiplicity of dimensions), divergent (relating to different constituencies), transpositive (altering relevant criteria when different levels of analysis are used), and complex (having nonparsimonious relationships among dimensions).

A number of excellent papers have recently been published which outline many of the inadequacies and complexities of organizational effectiveness research, especially Goodman and Pennings (1977), and which also provide helpful suggestions for improving research methodology. Fewer empirical studies have been reported, however, which explicitly address those issues. The purpose of this paper is to present the results of an empirical study that attempts to deal directly with several of the important problems currently plaguing organizational effectiveness research.

PROBLEMS IN ASSESSING ORGANIZATIONAL EFFECTIVENESS

Criteria problems are the major obstacles to the empirical assessment of organizational effectiveness, and they are of

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The following are some of the criticisms which have been advanced concerning the goal approach to effectiveness: (1) There is a focus on official or management goals to the exclusion of the organizational member, organizational constituency, and societal goals (Blau and Scott, 1961; Scriven, 1967). (2) There is neglect of implicit, latent, or informal procedures and goals (Merton, 1957). (3) There is neglect of the multiple and contradictory nature of organizational goals (Rice, 1963). (4) Environmental influences on the organization and its goals are ignored (Lawrence and Lorsch, 1969). (5) Organizational goals are retrospective and serve to justify organizational action, not to direct it (Weick, 1969). (6) Organizational goals change as contextual factors and organizational behavior change (Warner, 1967; Pfiffner, 1977).

two general kinds. The first relates to the selection of the *type* of criteria indicating effectiveness, and the second relates to the *sources* or originators of the criteria. Problems of criteria type generally focus on (1) the aspect of the organization being considered, e.g., goal accomplishment, resource acquisition, internal processes, (2) the universality or specificity of criteria, (3) the normative or descriptive character of criteria, and (4) the static or dynamic quality of criteria.

Organizational Aspects

Outputs and goal accomplishment are probably the most widely used criteria of effectiveness (Georgopolous and Tannenbaum, 1957; Etzioni, 1964; Price, 1972; Hall, 1978). Not only were the earliest approaches to effectiveness guided by a rationalistic goal model, but recent writers (Price, 1968; Campbell, 1977; Scott, 1977) have continued to advocate accomplishment of goals as the defining characteristic of organizational effectiveness.

Others, however, have pointed out problems with specifying goal accomplishment as the criterion for effectiveness¹ (Merton, 1957; Blau and Scott, 1962; Rice, 1963; Scriven, 1967; Warner, 1967; Pfeffer, 1977). Consequently, alternatives to the goal approach have been proposed.

One alternative to the goal model — the system resource model or the natural systems approach — was introduced by Yuchtman and Seashore (1967). This approach focuses on the interaction of the organization with its environment, and defines organizational effectiveness as the ability of the organization to exploit its environment in the acquisition of scarce and valued resources. Organizational inputs and acquisition of resources replace goals as the primary criteria of effectiveness.²

Another approach relies on internal organizational processes as the defining characteristics of effectiveness. Steers (1977: 7), for example, stated, "One solution that at least minimizes many of the obstacles to addressing effectiveness is to view effectiveness in terms of a process instead of an end state." Similarly, Pfeffer (1977) suggested that to study organizational effectiveness, it was necessary to consider the process by which organizations articulate preferences, perceive demands, and make decisions. Organizational development approaches (Beckhard, 1969), organizational health models (Bennis, 1966) or Likert's (1967) "system 4" are variations on the process model in that each uses internal organizational activities or practices as the dominant criteria of effectiveness.³

Universality of Criteria

Georgopolous and Tannenbaum (1957), Caplow (1964), Friedlander and Pickle (1968), Mott (1972), and Duncan (1973) are among those who suggest that effective organizations are typified largely by the same criteria (e.g., adaptivity, flexibility, sense of identity, absence of strain, capacity for reality testing capacity) and that research on effectiveness should include the appropriate universal indicators. Others point out that organizations have different characteristics, goals, and constituencies, and that each organization (or each type of organization) requires a unique set of effectiveness criteria

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Criticisms of the system-resource approach include the following: (1) Efficiency and effectiveness are not separated under this approach (Price, 1972). (2) Focusing only on inputs may have damaging effects on outputs (Scott, 1977). (3) This approach assumes that the only valuable aspects of organizations are those which aid further input acquisition (Scott, 1977). (4) Only the organizational directors' viewpoint is taken (Scott, 1977). (5) It is really the same as the goal model since increasing inputs is an organizational operative goal (Kirchhoff, 1977). (6) This approach is inappropriate when considering nonprofit organizations (Molnar and Rogers, 1976).

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Criticisms of the process model include the difficulty of monitoring organizational processes (Dornbusch and Scott, 1975), the expense of gathering data on processes (Scott, 1977), the focus on means to the neglect of ends (Campbell, 1977), and the inaccuracy of most process data. "Almost every individual instance of [process data] reporting has something wrong with it" (Haberstroh, 1965: 182).

(Rice, 1961; Hall, 1972; Scott, 1977). The researcher, in other words, must choose a level of specificity for criteria.

Normative/Descriptive Criteria

A related problem refers to the extent to which the research selects derived or prescribed criteria (Price, 1972). McGregor (1960), Argyris (1962), Bennis (1966), Likert (1967), and others have all indicated what qualities effective organizations should possess, and they approach the problem of effectiveness deductively by stating that the organization must meet these standards to be effective. Other writers have used a descriptive approach in which organizational characteristics or criteria are described (inductively derived) and a priori evaluative standards are avoided (Mahoney *et al.*, 1967, 1969, 1974; Price, 1972; Webb, 1974; Steers, 1977). Thompson (1967) has suggested that the difference may be typified as goals for the organization versus goals of the organization.

Dynamic/Static Nature of Criteria

A fourth problem refers to static versus dynamic variables. Most studies of organizational effectiveness include static views of inputs, processes, or outcomes (Mahoney, 1967; Seashore and Yuchtman, 1967; Negandhi and Reimann, 1973; Hall, 1978) although a few use criteria indicating changes over time (Webb, 1974; Pennings, 1975, 1976). Even when change criteria are included, however, the approach is generally analogous to a blurred snapshot in which indications of movement can be detected than to a motion picture in which the criteria changes can be tracked as they occur. Research conducted by Kimberly (1976) and by Miles and Cameron (1977) are among the few examples of studies in which longitudinal data on effectiveness have been gathered and monitored over time.⁴

Sources of Criteria

Organizational effectiveness criteria are also likely to differ depending on whose viewpoint is taken, that is, on their sources. For example, the appropriate organizational constituency, the level of analysis specified by the criteria, and the use of organizational records versus perceptual reports are all choices facing the researcher.

Constituencies. Effectiveness criteria always represent someone's values and biases, but there are conflicting opinions about who should determine effectiveness criteria and who should provide data for their measurement. Some investigators advocate relying on major decision makers and directors, or the organization's dominant coalition, to generate the criteria and to supply effectiveness information (Yuchtman and Seashore, 1967; Gross 1968; Price, 1968; Pennings and Goodman, 1977). Others suggested that these top administrators or managers have narrow and biased perceptions, so that a broad range of constituencies should be tapped (Pffifner and Sherwood, 1960; Steers, 1975; Katz and Kahn, 1978). Still another group (Bass, 1952; Friedlander and Pickle, 1968; Reinhardt, 1973; Scott, 1977) points out that constituencies outside the organization are relevant for generating criteria inasmuch as derived goals (Perrow, 1961), "macroquality" criteria (Reinhardt, 1973), or information con-

⁴ Miles and Cameron (1977) in their study of the U.S. tobacco industry, for example, found that one firm, R. J. Reynolds, was most effective if static criteria were used, whereas another firm, Philip Morris, was most effective when dynamic criteria were considered.

cerning the organization's contribution to the supersystem (Katz and Kahn, 1978) are obtained from that group. Cameron (1978a) and Miles (1979) point out that various strategic constituencies exist for every organization, and that ratings from different constituencies may be more or less appropriate depending on the purpose of the evaluation and the domain of effectiveness.

Seashore (1976) and Scott (1977) both suggest that effectiveness criteria differ among separate constituencies because each constituency perpetuates criteria in its own self interest. Friedlander and Pickle (1968) and Molnar and Rogers (1976) found empirical evidence supporting this view.

Level of analysis. Bidwell and Kasarda (1975), Hirsch (1975), and Katz and Kahn (1978) are among those who advocate relying on the supersystem or the external organizational set to determine effectiveness criteria (they define effectiveness as the ability of the organization to adapt to, manipulate, or fulfill expectations of the external environment); whereas writers such as Webb (1974), Scott (1977), Steers (1977), and Weick (1977) suggest that criteria should relate to the organization as a unit (they see effectiveness related to the goals, processes, or characteristics of the organization itself). Pennings and Goodman (1977) propose an approach to effectiveness which focuses on organization subunits (organizational effectiveness is associated with the contributions of and the coordination among subunits), and Kaufman (1960), Argyris (1962), Lawler, Hall, and Oldham (1974) and others, focus on individual performance as criteria of organization effectiveness (organizational effectiveness is assumed to be indicated by individual behaviors and/or satisfaction).

Organizational records versus perceptual criteria. A third source of criteria concerns the use of organizational records instead of personal perceptions. Records are sources in which information concerning effectiveness criteria may be obtained with no direct involvement by organizational members (e.g., archival records such as organizational histories, changes in personnel, stock price changes) whereas personal perceptions are criteria collected directly from organizational members (generally through questionnaires, interviews, or direct observation). Campbell (1977) labeled criteria obtained from organizational records "objective criteria" and asserted that such measures are inappropriate and "preordained to fail in the end." Effectiveness criteria, according to him, should always be subjective. On the other hand, Seashore and Yuchtman (1967) relied totally on organizational records and argued that these were the most appropriate sources. Economists have generally relied on objective sources for criteria, whereas industrial and organizational psychologists have more often used perceptions. Studies such as those done by Pennings (1975, 1976) have included both objective and perceptual indicators.

Figure 1 compares the types and sources of effectiveness criteria which were selected in 20 recent empirical studies of organizational effectiveness. Empirical studies have been plotted in the figure based on the sources used to assess criteria and the types of criteria included in the investigation. The figure points out the variety of criteria choices made by

researchers, since only 9 of 43 cells contain overlapping choices. Most empirical investigations, in other words, have used sources and types of effectiveness criteria which are not comparable with other empirical investigations. Furthermore, the large number of blank cells in the figure illustrates the difficulty of providing a complete picture of organizational effectiveness in any one study as well as the lack of information on a large number of possible criteria types. Organizational effectiveness criteria on one level of analysis, for example, may be different from criteria on other levels. Not only do the pragmatics of research constrain the types and sources of criteria that can be considered, but some choices of criteria may be more appropriate in one type of organization than in another (Molnar and Rogers, 1976).

In institutions of higher education, for example, unique organizational characteristics have presented special problems

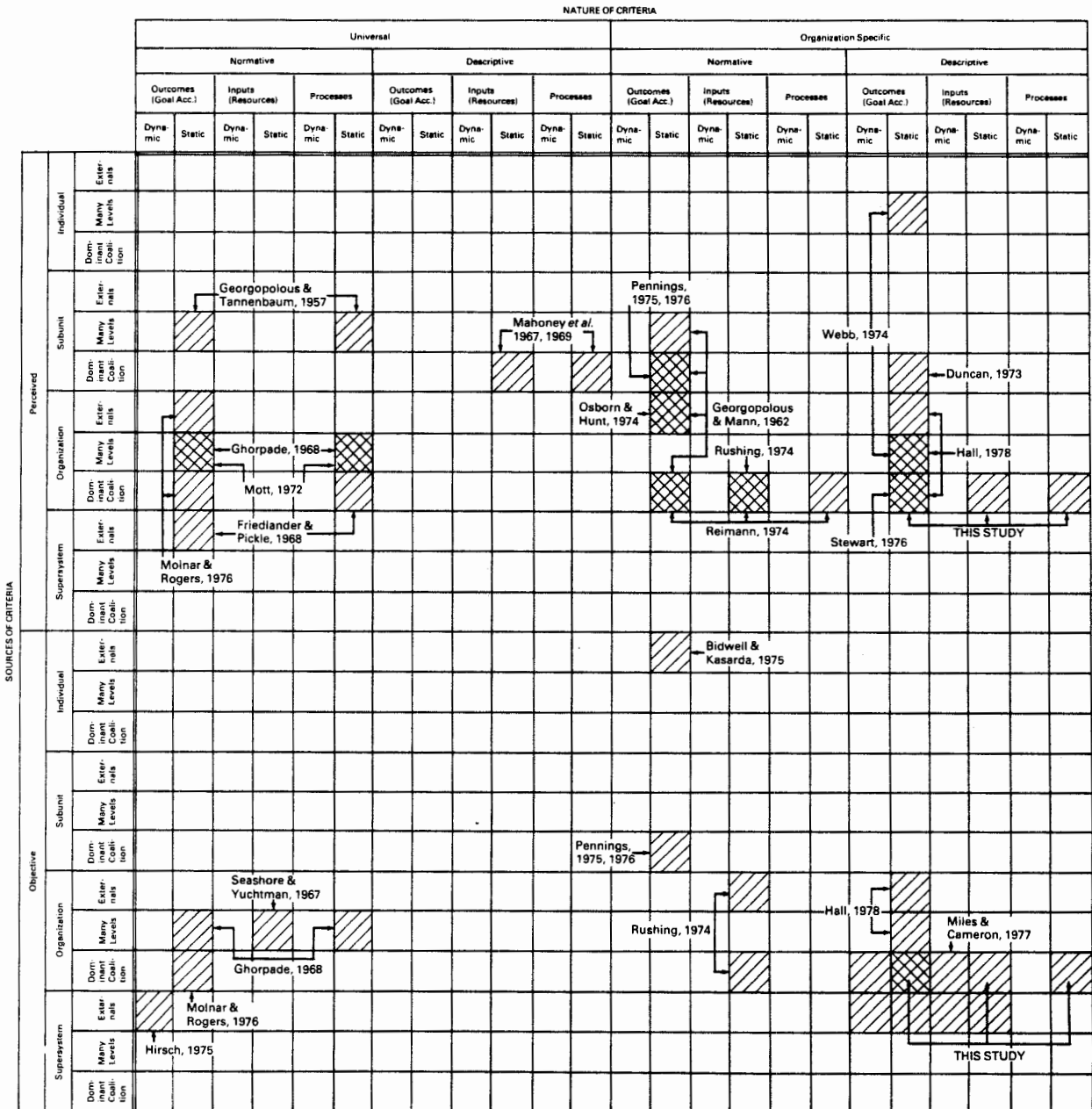


Figure 1. Selections of sources and types of criteria for 21 empirical studies of organizational effectiveness.

for researchers in selecting and assessing criteria for organizational effectiveness. Choices regarding the types and sources of criteria illustrated in Figure 1 have been particularly difficult to make in studying these organizations, so that the characteristics of the institutions as well as problems associated with the concept of organizational effectiveness have served as obstacles to empirical assessment of effectiveness in colleges and universities. In fact, almost no studies have been conducted to measure organizational effectiveness in institutions of higher education.

Although some instruments, such as the Educational Testing Service's *Institutional Functioning Inventory* (1970), Pace's *College and University Environment Scales* (1969), or WICHE's Management Information System materials have been widely distributed and used, none of these instruments purported to assess criteria of organizational effectiveness. Several researchers have conducted studies of quality of graduate programs (Cartter 1966, 1977; Blau and Margulis, 1973), while others have investigated objective correlates of those quality ratings (Beyer and Snipper, 1974). Still other researchers have focused on individual variables such as student achievement, teaching processes, and learning climates (Astin, 1968, 1971, 1977; Feldman and Newcomb, 1969; Bowen, 1977), but colleges and universities as organizations were not the primary focus in these studies. Clark (1970) and Blau (1973) reported two important empirical studies of colleges as organizations, but neither was interested in assessments of effectiveness per se.

Problems in Assessing Effectiveness in Higher Education

Some formidable problems stand as obstacles to the selection and assessment of criteria of effectiveness in institutions of higher education. First, it is difficult to specify concrete, measurable goals and outcomes. Some researchers have lamented the "complexity, diffuseness, ambiguity, and changeability" and typify educational goals and outcomes (National Institute of Education, 1975), and some have suggested that without meaningful and measurable objectives, it is impossible to assess the effectiveness of higher education (Warner and Havens, 1968; Chickering, 1971; Hayman and Stenner, 1971). Barro (1973), for example, stated that because information on effectiveness is not usually collected by colleges and universities, prospects for the evaluation of effectiveness "do not seem very good," and Hutchins (1977: 5) asserted:

The only way you can criticize a university, the only way you can appraise it, the only way you can determine whether it's good or bad or medium or indifferent, is to know what it's about, what it's supposed to be, what it's supposed to be doing. If you don't know these things, you haven't any standards of criticism . . . [Universities] haven't any very clear ideas of what they're doing or why. They don't even know what they are.

Second, the evaluation of institutional effectiveness engenders skepticism and defensiveness in the academic community. Several commentators (Dressel, 1972; Barro, 1973; Bowen, 1973) hypothesized that calls for evaluations of effectiveness or institutional accountability are seen as the public trying to scrutinize and control higher education, or as the existence of defects that need to be corrected. The

implication of pressures to evaluate seems to be that freedom to experiment and innovate, to risk failure, or to establish unique quality standards is no longer the prerogative of the institution and that evaluations restrict academic freedom.

Individual institutions, furthermore, tend to view themselves as having unique characteristics and goals, and as not being comparable to other institutions. Dressel's (1971: 6, 7) report of an administrator's position on evaluation is illustrative of the approach taken by many administrators in higher education:

This evaluation will be a waste of time, for either it will demonstrate that the program is excellent or that it is defective in some sense. In the first case it is a waste of time because we already know that it's a good program, and in the second, it's a waste of time because we would not believe any evidence of weakness.

Third, the financial concerns of colleges and universities have led to research on efficiency rather than on effectiveness. Meeth (1974) suggested that the central concern of higher education in the 1970s has been how to provide quality education for less money by focusing on efficiency. Efficiency has generally been defined as the ratio of costs to some output, or as the amount of energy lost in the production of organizational output (Katz and Kahn, 1978). In higher education, efficiency has most often been measured by indicators such as costs per student, student-faculty ratios, costs per faculty member, costs per square foot, etc. (Bowen and Douglas, 1971; O'Neill, 1971; Mood *et al.*, 1972; Meeth, 1974; Hartmark, 1975). These criteria of efficiency, while being well used, are not sufficient for understanding institutional success inasmuch as educational institutions must not only demonstrate efficiency, i.e., using resources with little waste, but they must also be able to demonstrate the effective use of resources as well. Fincher (1972) pointed out that efficiency and effectiveness could not be assessed by the same criteria, and more emphasis was needed on criteria of effectiveness.

Finally, even the applicability of the concept of organizational effectiveness to colleges and universities has been questioned, as by writers who have applied the terms "organized anarchy" or "loosely coupled system" to colleges and universities (Cohen and March, 1974; Weick, 1976). March and Olson (1976: 176), for example, have suggested that organizations in higher education are "complex 'garbage cans' into which a striking variety of problems, solutions, and participants may be dumped." Any attempt to make statements about the effectiveness of such organizations, therefore, is seen as tenuous, since the rules, goals, and choices operating within these organizations are ambiguous, changing, and often not recognized.

It has been found (Cameron, 1978b), however, that institutions of higher education vary on a continuum from loose coupling, i.e., organized anarchies, to tight coupling i.e., structured bureaucracies. Some colleges for example, maintain a relatively homogeneous structure and operation with many effectiveness criteria being relevant for the subsystems within the institution. In others, common criteria are difficult to find since subsystems are mostly autonomous.

The problem of studying organizational effectiveness in organizations which vary on the loosely coupled to tightly coupled continuum lies in identifying a core group of effectiveness criteria that are relevant to organizational members, applicable across subunits, and comparable across institutions. The criteria choices made in this study were oriented toward identifying such criteria.

CRITERIA CHOICES

Selections of Criteria

The problem of ambiguity and diffuseness of goals in colleges and universities was addressed by focusing on organizational characteristics rather than on goals, since it seemed unlikely that goals or outcomes were made operational in most institutions. Both objective and perceptual criteria were obtained from some institutions of higher education, and anonymity for both institutions and individuals was guaranteed in an attempt to reduce defensiveness and reporting bias. The study focused on the organizational level, since it has been the most neglected in research on higher education, and because it would allow for comparisons among institutions. Criteria specifically related to institutions of higher education were used instead of universal criteria applicable to all types of organizations. The generality of criteria often resulting from a universalistic approach and the unique organizational features of colleges and universities made this choice seem reasonable. Since there is no precedent for criteria of effectiveness in institutions of higher education, this study used an inductive approach in generating them rather than prescribing a priori standards. And, although indications of organizational change over time were sought as criteria, the study was not longitudinal, and the effectiveness indicators are best typified as static rather than dynamic. Figure 1 points out where this study falls in relation to other empirical investigations of effectiveness.

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Several sources of organizational effectiveness criteria proved to be of particular value, among which were Price (1968), Pace (1969), the *Institutional Functioning Inventory* (1970), Mott (1972), Blau (1973), Campbell (1973, 1974), Balderston (1974), Micek and Wallhaus (1974), Hartmark (1975), the *Michigan Survey Research Center Assessment Package* (1975), National Institute of Education Reports (1975), and Steers (1975).

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Student representatives were not included in the study's dominant coalition because (1) students are not generally in a position to directly influence the direction and functioning of the institution; (2) they generally have more limited information about the overall institution than do other dominant coalition members; (3) they have been found in other studies not to differ significantly in their perceptions of the institution from faculty members or administrators (Educational Testing Service, 1970); and most importantly, (4) constraints on time and money prohibited a representative sample from being gathered from relevant student groups on various campuses.

Many of the criteria used to assess organizational effectiveness were initially generated from a search of the literature.⁵ Approximately 130 variables emerged from examining this literature, and they provided a framework from which interviews were later conducted with individuals at several colleges and universities.

Selections of Constituency

The strategic constituency chosen to be interviewed in deriving the effectiveness criteria for this study was the internal dominant coalition. The internal dominant coalition refers to representatives of the major subunits or interest groups within the college or university, who influence the direction and functioning of the organization (Thompson, 1967). In the institutions in this study, this included academic, financial, general, and student affairs administrators, deans, and heads of academic departments.⁶ Only formal position holders or formal representatives were included in defining the dominant coalition. Whereas informal leaders or charismatic personalities may have an influence on organizational direction, resource allocation, or functioning, it is extremely difficult to identify who those individuals are; therefore, formal position

holders were relied upon as being representative.

The dominant coalition was selected first because several writers (Yuchtman and Seashore, 1967; Price, 1972; Pennings and Goodman, 1977) argued that the organization's major decision makers or the dominant coalition should be the sources of criteria for organizational effectiveness and their measurement, since they comprised the resource allocators, the determiners of organizational policy, and the explicators of organizational goals. Thompson (1967) suggested that the dominant coalition was the most likely group to make specific both the cause and effect relationships within an organization and the hierarchy of outcomes to be preferred. Furthermore, as Pennings and Goodman (1977:152) noted, because members of the dominant coalition served as the representatives in the bargaining process within an organization, "consensus among members of the dominant coalition can be employed as a vehicle for obtaining effectiveness data." Van de Ven (1977) suggested, further, that solving the wrong problem with the right methods can be avoided only if users of information about organizational effectiveness are included as sources. Members of the dominant coalition are among the major users of information about organizational effectiveness.

Second, members of the dominant coalition were assumed to be a knowledgeable source about each of the organizational aspects under investigation at the institutional level. The mutability, comprehensiveness, divergence, transpositiveness, and complexity of organizational effectiveness require that a limited domain of effectiveness be specified in evaluations, or that a specific operationalization of the concept be determined. This domain of effectiveness is defined by the aspects of the organization being studied coupled with the level of analysis used (Cameron, 1978a). In this study, the focus was limited to institutional characteristics relating to acquisition of resources, the vitality and viability of internal processes and practices, and organizational outcomes and emphases. The dominant coalition is likely to be a more reliable source of information for these organizational aspects than other constituencies — for example, most external constituencies.

Selections of Institutions

It was assumed that in large, diverse institutions, dominant coalition members had less college-wide information than in smaller institutions because of the size and autonomy of departments and programs. Thompson (1967) argued that dominant coalition members, as representatives in the internal organizational negotiations, became exposed to organization-wide information as they functioned in their roles, and he suggested that more information was available to them when the dominant coalition was smaller.

The size of the institutions included was therefore limited to those with under 10,000 undergraduate students, and the focus of the study was the *undergraduate* part of the institutions. These constraints eliminated from consideration large, loosely coupled universities having many semi-autonomous professional schools from the study and helped increase the likelihood that respondents would have information related to the overall organizational level.

METHOD

Interviews were conducted with individuals associated with a variety of institutions of higher education to ensure that the effectiveness criteria had relevance for colleges and universities and that the criteria could be measured. Separate data were collected in two studies. The first study represented an initial attempt to assess the reliability and validity of the effectiveness criteria through questionnaires and interviews. The second study was designed primarily to effect refinements and improvements in the instruments and to improve their psychometric properties.

Institutional Sample

The first study included four colleges in New England with two more schools added in the second study. Two institutions were public and four were private, and their undergraduate enrollments ranged from approximately 1,000 to approximately 10,000. Two institutions were primarily commuter schools, with the others being mostly residential; four had unionized faculties, while two did not; and one of the institutions was in a rural setting, while the other five were in or near cities with a population of over 100,000.

Interviews to Derive Dimensions

Four or five top administrators at six colleges in the northeastern United States along with about ten faculty members were interviewed. They were usually the provost or academic vice-president, the president, the financial or administrative vice-president, the dean of student affairs, an assistant to the president or a director of institutional research and one or two department heads on each campus. Individuals were asked to respond to questions, including the following:

1. What organizational characteristics do effective colleges possess?
2. What is it at this institution that makes a difference in terms of its effectiveness?
3. What would have to change in order to make this institution more effective?
4. Think of an institution of higher education that you judge to be effective. What is it that makes that institution effective?
5. Of the 130 or so items generated from the literature, which ones are not relevant to the effectiveness of this school?
6. Of the 130 items, which ones are not measurable or for which are data not available?

Interviews lasted from one and one half to four hours, and special emphasis was placed on criteria relating to the organizational level of analysis. For example, references to individuals or to specific departments or programs were avoided; instead, criteria were sought that characterized the entire institution. Therefore, the success of the president's personal leadership style or the characteristics of a unique program in one department were not generally included, whereas the institution's orientation toward participatory decision making involving the faculty, or the emphasis it placed on developing community-oriented programs were. Some of the effectiveness criteria resulting from the interviews did

relate to *aggregates* of individuals, e.g., student educational satisfaction, but the focus in these criteria tended to be on the entire organization rather than on one institutional sub-unit.

Certain clusters of items became apparent as the criteria emerged from the interviews, and on an a priori, intuitive basis, nine separate groupings of criteria were formed. As a rationale for this strategy of combining criteria into dimensions on an intuitive basis, Campbell (1977: 23) stated, "Criterion combination quite properly is based on value judgments, and there is no algorithm or higher order truth to which we can appeal." Several alternative groupings were tried but the one used here represents the only grouping that encompassed all the effectiveness criteria generated from the interviews.

These nine dimensions represented conceptually different constructs, although they were not assumed to be independent. The nine effectiveness dimensions and the criteria they encompassed were:

1. Student educational satisfaction — criteria indicated the degree of satisfaction of students with their educational experiences at the institution.
2. Student academic development — criteria indicated the extent of academic attainment, growth, and progress of students at the institution.
3. Student career development — criteria indicated the extent of occupational development of students, and the emphasis on career development and the opportunities for career development provided by the institution.
4. Student personal development — criteria indicated student development in nonacademic, noncareer oriented areas, e.g., socially, emotionally, or culturally, and the emphasis on personal development and opportunities provided by the institution for personal development.
5. Faculty and administrator employment satisfaction — criteria indicated satisfaction of faculty members and administrators with jobs and employment at the institution.
6. Professional development and quality of the faculty — criteria indicated the extent of professional attainment and development of the faculty, and the amount of stimulation toward professional development provided by the institution.
7. Systems openness and community interaction — criteria indicated the emphasis placed on interaction with, adaptation to, and service in the external environment.
8. Ability to acquire resources — criteria indicated the ability of the institution to acquire resources from the external environment, such as good students and faculty, financial support, etc.
9. Organizational health — criteria indicated benevolence, vitality, and viability in the internal processes and practices at the institution.

Instruments

Two types of instruments were developed to measure the criteria in the nine dimensions. The first was a questionnaire asking respondents to describe the extent to which their college possessed certain organizational characteristics (effectiveness criteria). Questionnaire items centered mostly on ratings of organizational traits (e.g., how much emphasis

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was given to college-community relations?) rather than on personal feelings or affect (e.g., how do you like this school?), in order to reduce the possibility of obtaining highly intercorrelated perceptions all related to the general satisfaction of respondents. Appendix A lists the questionnaire items assessing the effectiveness dimensions.

The second instrument included a set of questions designed to obtain objective data from the records of each institution. Appendix A also lists these items for the eight dimensions measured. These objective data were provided by the academic vice-president or provost, the financial vice-president, the dean of students, the director of institutional research, the director of development, or other appropriate administrators at each institution. The reason for developing both objective and perceived instruments was to provide data for testing the external validity of the dimensions, since there was no way to determine the amount of bias existing in the ratings of the dominant coalition members without such a test.

A modified form of Cattell's (1966) "marker item" procedure was used to guide the additions and refinements made to the questionnaire items for the second study. This procedure suggests that items be chosen which have meaning central to the concept being measured, i.e., face validity, and that overlap should occur with other criteria known to be indicators of the concept. Items were added to several of the scales, consequently, in order to make certain that the central concept indicated by the title of the effectiveness dimension was being measured. These new items were similar to Cattell's marker items. Mean within-dimension correlations ranged from .491 to .636 for the marker items, providing evidence that the central meanings of the dimensions, as specified by their titles, were being tapped.

Respondent Sample

The questionnaires were mailed, under a covering letter signed by the president or academic vice-president, to approximately 75 administrators and academic department heads at each of the six institutions. Anonymity for all respondents and institutions was guaranteed. Reports of the results of the study were promised to each participating institution, but respondents and institutional names were kept confidential. Respondents to the questionnaire were divided into five job categories: general, academic, financial, and student affairs administrators, and academic department heads. About half of the respondents were faculty members and about half were administrators. Usable questionnaires returned in the first study were 191 (70 percent); 134 (72 percent) were returned in the second study. The frequencies of returns for the five respondent categories are shown in Table 1.

Analysis

At least two different strategies were possible for analyzing the data obtained from these dominant coalition members. One was to emphasize the reliability or internal consistency of measures of the central concepts in the nine effectiveness dimensions, and the other was to ensure the inclusion

Table 1

Response Rates for Five Categories of Respondents in Six Institutions

Job Category	Responses ^a			
	Study 1		Study 2	
	<i>N</i>	%	<i>N</i>	%
Administrators				
General	23	82	20	77
Academic	37	70	15	68
Financial	16	70	7	54
Student affairs	34	85	32	70
Academic department head	81	62	60	77
Total	191	70	134	72

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Responses across institutions ranged from 54% to 84%.

of all variables generated by the interviews regardless of their relationships to the nine central concepts. The former strategy was adopted because, first, inasmuch as reliability is a prerequisite for validity (Nunnally, 1967; Kerlinger, 1973), it was important for the internal consistency (reliability) of the criteria to be demonstrated in order that the effectiveness dimensions could be validated. Since the questionnaire items were constructed to assess the criteria comprising the dimensions, if it was found that one of the items had low internal consistency in relation to other items thought to measure the same dimension, the item was dropped since there was no way to determine whether the variance in the item was attributable to another construct being assessed (trait variance) or to method or to random error. It was thought more important to demonstrate the reliability of the measures than to focus solely on the comprehensiveness of the criteria. This is similar to the strategies used by Mahoney (1967) and by Seashore and Yuchtman (1967) in the generation of their effectiveness criteria.

Second, it had been determined that institutional data were not available for every single criterion that emerged from the interviews. Therefore, unless a large number of questionnaire items turned out to be unrelated to the nine underlying dimensions, it was appropriate for reasons of meaningfulness and parsimony to concentrate on the nine central concepts indicated by the dimension titles.

RESULTS

Internal Consistency and Discriminant Validity

Eight of the questionnaire items in the first study were found to have low correlations within their own effectiveness dimension as well as with items from the other eight effectiveness dimensions. These eight items, which had an average intrascale correlation below .20, included quality of written work of students, attrition of students because of too few extracurricular activities, faculty grievances, attrition of faculty because of dissatisfaction, proportion of the budget available for professional development, work efficiency, and pay satisfaction. Moreover, there were no high intercorrelations among the eight items themselves; consequently, they were not included in other statistical

Table 2

Between-Dimension and Between-Item Correlations for the Nine Effectiveness Dimensions

	No. of items	\bar{x}	s.d.	Mean Item Correlations		Dimensionst												
				Inside	Outside	1	2	3	4	5	6	7	8	9				
†1.	4	3.78	.8	.37	.23*	(.70)‡												
	3	2.84	.7	.36	.29		(.63)											
2.	3	4.79	1.0	.38	.20*	.37	(.65)											
	5	3.79	1.0	.40	.26	.56	(.77)											
3.	4	3.65	.9	.27	.14	.33	.22	(.60)										
	5	4.27	1.0	.33	-.01***	.05	-.20	(.71)										
4.	3	4.24	.9	.63	.13***	.40	.54	.23	(.66)									
	4	3.23	1.2	.61	.29***	.56	.39	-.02	(.86)									
5.	6	3.94	1.1	.40	.21**	.49	.36	.31	.34	(.91)								
	6	4.74	1.5	.57	.30***	.60	.39	.05	.36	(.89)								
6.	4	4.62	.9	.31	.17*	.31	.32	.25	.32	.47	(.73)							
	5	4.48	1.1	.50	.24**	.42	.43	.02	.37	.37	(.83)							
7.	5	3.52	1.2	.47	.24**	.41	.33	.28	.34	.50	.46	(.90)						
	5	3.96	1.2	.51	.27**	.44	.46	.13	.55	.43	.45	(.84)						
8.	5	4.79	1.0	.46	.26**	.57	.56	.33	.46	.54	.42	.47	(.81)					
	6	4.49	1.1	.50	.33*	.68	.66	-.04	.59	.58	.55	.59	(.86)					
9.	15	3.79	1.0	.46	.23***	.48	.28	.34	.39	.59	.41	.55	.50	(.92)				
	17	3.91	1.2	.40	.30	.65	.57	-.10	.52	.69	.49	.56	.69	(.93)				

• Significant differences between inside and outside correlations at the $p < .05$ level.

•• Significant differences between inside and outside correlations at the $p < .01$ level.

••• Significant differences between inside and outside correlations at the $p < .001$ level.

† 1. Student Educational Satisfaction; 2. Student Academic Development; 3. Student Career Development; 4. Student Personal Development; 5. Faculty and Administrator Employment Satisfaction; 6. Professional Development and Quality of the Faculty; 7. System Openness and Community Interaction; 8. Ability to Acquire Resources; 9. Organizational Health.

‡ Numbers in parentheses are reliability coefficients.

Note: The top numbers for each dimension refer to the first study, and the bottom numbers refer to the second study.

analyses of the dimensions. Coefficient alpha was applied to test the internal consistency reliability of the effectiveness dimensions and acceptable levels of reliability were found for each of them. Nunnally (1967) suggested that for exploratory research, a reliability of between .50 and .60 was acceptable, and in the first study the lowest reliability coefficient among the nine effectiveness dimensions was .601, while the highest was .928. In the second study, reliability coefficients ranged from .628 to .924. The relatively high correlations of the marker items in the second study with the appropriate effectiveness dimensions also provided some evidence for the face validity of the dimensions. The internal consistency reliability for each of the dimensions is shown in Table 2.

Factor analytic procedures also largely confirmed the existence of the dimensions. Oblique, varimax, and quartimax rotations were used in both studies, and the number of factors was limited to between six and twelve to try to

uncover any underlying dimensions. Appendices B and C contain the factors produced by an orthogonal rotation pattern in which an eigenvalue of 1.0 specified the number of factors. In the first study, two of the effectiveness dimensions loaded on the same factor and two other dimensions split into two factors. After several questionnaire items were reworded to improve their meaningfulness and clarity for respondents, the second study produced a single factor for each of the dimensions except Student Educational Satisfaction, which did not load on any of the factors. Furthermore, a nine-factor rotation still did not produce a factor for this dimension.

Average within-dimensions correlations for each item were compared to the mean correlations of each item with all items outside its own effectiveness dimension as one test of the discriminant validity of the items. It was found that within-dimension mean correlations were higher than the mean outside correlations for every item except one in the first study and for all items in the second study. The single item in the first study (opportunities for personal development) was eliminated from further analysis. As Table 2 indicates, this finding confirmed that the dimensions were composed of items with high internal consistency and that they were distinguishable one from another. Also, after the median correlation coefficient for all items within a dimension was computed, correlations between the dimension and all outside items were inspected to determine overlapping among items. The purpose was to uncover the effectiveness items that correlated highly with more than one dimension and to determine which dimensions had overlapping items. Several items were slightly reworded prior to the second study as a result of this analysis in order to help clarify the conceptual differences among the effectiveness dimensions for future respondents.

The Student Educational Satisfaction dimension and the Organizational Health dimension in the second study were found to contain discriminating items, but the dimensions taken as a whole were weak in discriminant validity. Table 2 demonstrates, for example, that mean within-dimension correlations were not significantly higher than were correlations outside the dimension for either Student Educational Satisfaction or for Organizational Health. Whereas correlations within dimensions were higher in value for each of these two dimensions, an insignificant *t*-test indicated a relatively high intercorrelation between these two dimensions and others.

Between-School and Between-Job Differences

Analyses of variance were performed to determine whether the effectiveness dimensions differentiated among the schools and among the respondent groups. For the scales to be employable in assessments of effectiveness, there needed to be some significant differences among the institutions. If all institutions scored the same on the nine effectiveness dimensions, the instruments would be of no use in assessing relative effectiveness in institutions of higher education. Furthermore, one method of testing construct validity is to demonstrate differences among groups

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expected to score differently on a measure (Cronbach and Meehl, 1955).

The five respondent job categories were also analyzed to determine if differences among them existed. Multivariate and univariate analysis of variance procedures were used to test for significant effects.

The results, summarized in Table 3, suggest that institutional affiliations do have a significant effect on responses for combined organizational effectiveness (MANOVA $p < .001$), but that the job or position held is not as important. That is, in both studies, the differences are significant among the means of the institutions but not for the five job categories. In the first study, the MANOVA F -test based on Wilks' lambda for job resulted in a significance level of $p < .03$ while the theta (θ) value, normally a more conservative test, resulted in a significance level of greater than .05. No statistical significance for job resulted in the second study.

Table 3

Multivariate and Univariate Analysis of Variance for the Effectiveness Dimensions						
	Institution		Job		Interaction Institution X Job	
	F	θ	F	θ	F	θ
MANOVA†	4.76***	.281***	1.50*	.156	1.06	.174
	19.06***	.282***	1.08	.127	1.37	.228

Dimension	Multiple R^2	Institution		Job		Interaction Institution X Job
		F	η^2	F	η^2	F
1. Student educational satisfaction	.124	6.08***	.09	1.71	.04	1.29
	.478	23.97***	.39	3.38**	.30	4.34
2. Student academic development	.185	9.73***	.13	3.39*	.06	1.51
	.517	44.55***	.50	.75	.12	2.50*
3. Student career development	.159	9.18***	.12	2.01	.03	.91
	.609	70.34***	.60	.32	.15	1.98
4. Student personal development	.087	2.61*	.03	2.91*	.05	2.05
	.366	12.56***	.60	1.24	.22	2.53*
5. Faculty and administrator employment satisfaction	.082	4.11**	.07	.62	.02	1.41
	4.080	18.34***	.37	1.24	.22	2.53*
6. Professional development and quality of faculty	.162	9.00***	.14	1.81	.03	.43
	.349	15.70***	.34	.20	.11	1.53
7. System openness and community interaction	.229	14.73***	.20	1.52	.05	1.57
	.282	3.54*	.15	2.04	.23	2.23
8. Ability to acquire resources	.207	11.53***	.17	2.19	.06	1.06
	.552	52.65***	.54	.51	.14	2.18
9. Organizational health	.223	13.38***	.18	2.31	.05	1.00
	.559	51.41***	.52	4.79***	.35	4.89***

•
 $p < .05$

••

$p < .01$

•••

$p < .001$

†

Degrees of freedom were 27 and 476 for institution, 36 and 612 for job, and 108 and 1199 for the interaction in the first study, and 9 and 111 for institution, 36 and 417 for job, and 36 and 417 for the interaction in the second study.

Note: The top numbers for each dimension refer to the first study, and the bottom numbers refer to the second study.

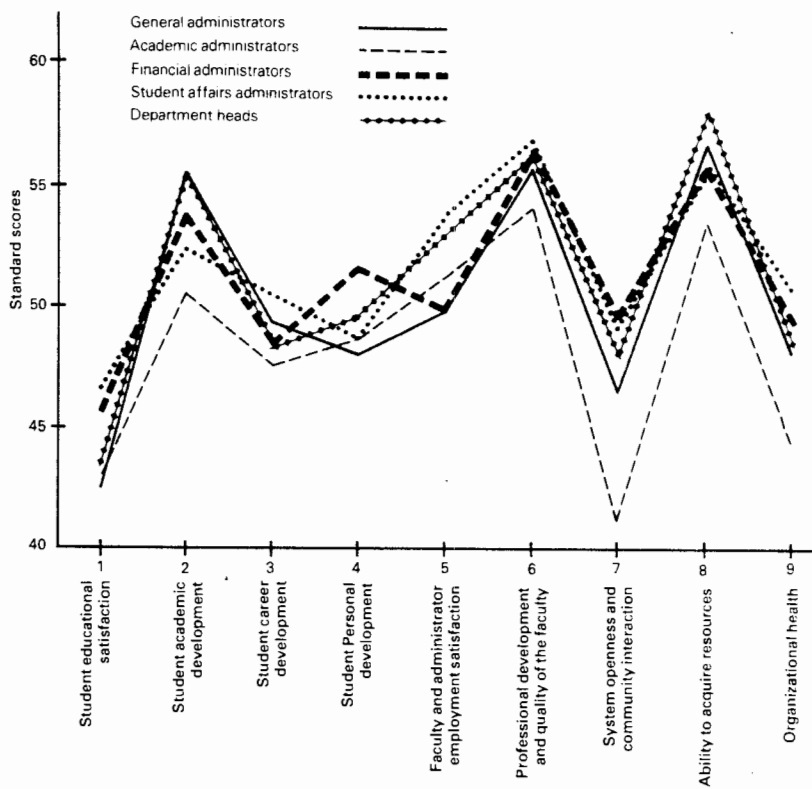


Figure 2. Organizational effectiveness profiles for the 5 job categories.

Using univariate ANOVA procedures for each separate effectiveness dimension showed that the employing institution had a significant effect in determining the perceptions of the respondents for every dimension ($p < .01$). The amount of variance accounted for among the dimensions by this institutional factor (η^2) ranged from 3 percent to 20 percent in the first study and 15 percent to 60 percent in the second

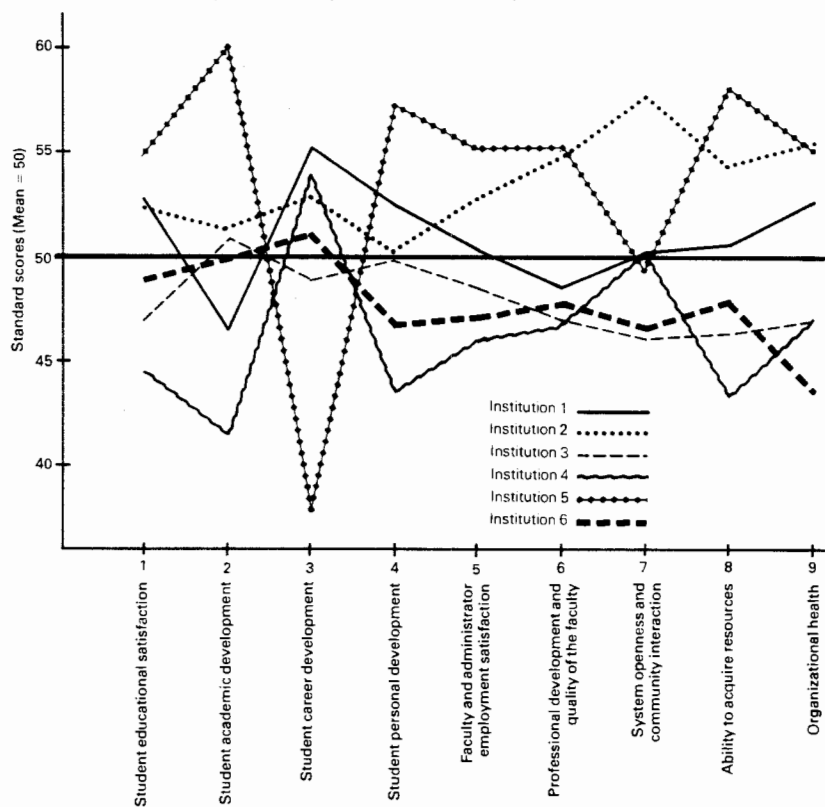


Figure 3. Organizational effectiveness profiles for the 6 institutions.

study. On the other hand, the job or position of the respondent had significant effects at the $p < .05$ level for only two effectiveness dimensions: Student Academic Development and Student Personal Development in the first study, and Student Education Satisfaction and Organizational Health in the second study. The interaction of the school and the job category was significant ($p < .05$) only for Student Personal Development in the first study and for four dimensions in the second study.

A profile analysis, shown in Figure 2, also confirmed the similarity of the different job categories. Mean scores for each respondent group included in the six institutions were plotted across the nine dimensions of effectiveness and tested for differences in levels (Nunnally, 1967). According to Van de Geer (1971), the MANOVA procedure had already tested for differences in parallelism. None of the respondent group pairs differed significantly (.50) in the levels of their ratings, so that it can be concluded that the dominant coalition members in these institutions had similar perceptions of effectiveness.

A second profile analysis plotting institutional means on the nine effectiveness dimensions revealed that the institutions not only varied significantly in their effectiveness profiles (significant differences exist among at least two of the institutions on every dimension), but that certain patterns of organizational effectiveness could be distinguished. Institution 5, for example, showed high effectiveness on all the dimensions except Student Career Development and System Openness and Community Interaction. This may indicate a tendency away from occupational and community involvement — an external emphasis — by this institution. Institutional success was achieved in the career and community oriented dimensions with low effectiveness scores on other dimensions. This occupational and community-oriented success may be somewhat surprising to the institution since the catalogues of each of all six institutions claimed a liberal arts undergraduate emphasis.

Institution 1 showed relatively high effectiveness on dimensions related to satisfaction and organizational morale, i.e., Student Educational Satisfaction, Faculty and Administrator Employment Satisfaction, and Organizational Health, while the academically oriented dimensions tended to be low, i.e., Student Academic Development and Professional Development and Quality of the Faculty. Institution 3, on the other hand, had relatively high effectiveness in Student Academic Development but was less effective in most other areas. Institution 2 had consistently high scores on the dimensions with the highest relative effectiveness being on the nonstudent-oriented dimensions. Institution 6 was almost exactly opposite to that pattern by being consistently low on the effectiveness dimensions but with the highest relative effectiveness being on the student oriented dimensions.

These results suggest that the institutions can be distinguished, on the basis of their effectiveness profiles, as those having very high or very low effectiveness on external dimensions (institutions 4 and 5), those with very high or low effectiveness on morale dimensions (institutions 1 and 3),

and as those having high or low effectiveness on student oriented dimensions (institutions 2 and 6). Furthermore, whereas institutional effectiveness profiles differ significantly from one another and relative strengths and weaknesses are evident, some institutions do achieve higher overall effectiveness than others.

The analyses of these two studies indicated that the hypothesized dimensions had acceptable reliability and that they were useful in differentiating among colleges and universities for organizational effectiveness. Each institution was found to vary uniquely across the nine effectiveness dimensions, although certain patterns of effectiveness seemed to emerge. Furthermore, scores on the dimension were generally not significantly affected by different respondent categories.

Evidence for Validity

Supporting evidence for internal consistency and discriminant validity in these studies still left questions unanswered about the external validity and construct validity of the effectiveness dimensions. There was a dilemma, however, in attempting to deal with validity. On the one hand, no generally accepted criteria exist against which to compare these perceptual dimensions; therefore, testing for concurrent or criterion validity was impossible. On the other hand, construct validity — an approach to validity used when no valid external criteria are available (Cronbach and Meehl, 1955) — was similarly questionable since, as Nunnally (1967) indicated, proof of construct validity comes from determining the extent to which measures of a construct fit into a network of expected relations. Inasmuch as organizational effectiveness in institutions of higher education has never been measured, no theoretical or predictable network of relationships has been possible between effectiveness of colleges and universities — particularly these nine dimensions — and other constructs. Campbell (1973) pointed out that much of the explanatory research on organizational effectiveness had been done using individual behavior or performance. Very few studies have used organizational units as degrees of freedom. Consequently, there is no well-defined nomological network for organizational effectiveness in general, let alone college and university effectiveness. This study was designed to begin the development of a network.

Some indications of validity in this research project were needed, nevertheless, in order that followup research, in which explanatory data could be obtained and related to the effectiveness constructs, would prove meaningful and worthwhile. Two separate pieces of evidence were found which suggested that the effectiveness dimensions had some external and construct validity.

Objective indicators of the effectiveness dimensions had been obtained from each of the six institutions, and it was hypothesized that positive correlations between the two sets of data would provide some evidence for the external validity of the perceptual measures. Table 4 reports the nonparametric rank order correlations between the objective data and the perceptual ratings.

Table 4

Rank-Order Correlations Between Objective and Perceptual Measures of the Effectiveness Dimensions

Dimension	<i>r</i>	<i>p</i> <
1. Student educational satisfaction	.600	.10
2. Student academic development	.829	.02
3. Student career development	-.657	.08
4. Student personal development	.771	.04
5. Faculty and administrator employment satisfaction	.314	.27
6. Professional development and quality of the faculty	.943	.002
7. System openness and community interaction	-.600	.10
8. Ability to acquire resources	.714	.05
9. Organizational health	No objective data collected	

Moderate to high positive correlations for all but two of the effectiveness dimensions provided some support for external validity, although two of the dimensions had, unexpectedly, negative correlations indicating that either the objective measures or the perceptual measures were faulty, that different and negatively correlated concepts were being assessed, that the concepts being measured were not unidimensional and had complex relationships with each other, or that the constructs being measured in the two effectiveness dimensions were confusing to respondents.

There was no sure way to determine the reason for the negative correlations in these two studies, particularly given the small sample, but a close examination of the objective and perceptual items for the eight dimensions did suggest that two separate concepts may have been assessed. In the case of Student Career Development, objective items focused on vocational counseling and work study, whereas the perceived items emphasized successful placement of students in desired post-college employment and the offering of a career oriented curriculum. The perceived items relating to Systems Openness and Community Interaction dealt mainly with community and professional activities of employees, whereas the objective items focused on continuing education and extension programs. Close examination of the items also revealed, however, that other dimensions had the same problem. That is, differences in objective and perceptual concepts could be hypothesized for almost all of the dimensions. For example, the objective measures for the Student Academic Development dimension seemed to emphasize continued academic attainment after leaving the institution whereas the perceptual measures emphasized academic development of students within the institution. Yet, the correlation coefficient for that dimension was high and positive.

This is not an unusual difficulty when comparing objective and perceptual measures, and similar problems have been found in relation to other concepts, most notably environmental uncertainty (Tosi, Aldag, and Storey, 1973; Downey, Hellreigel, and Slocum, 1975). Researchers on environmental

uncertainty have generally concluded that a choice should be made between the two types of measures and comparisons between them avoided. The dilemma in this study was that some evidence of external validity was needed to help determine the amount of bias existing in the perceptual ratings, yet comparisons with the objective data was tenuous. Limited support for external validity seemed to be justified for some of the dimensions since what appeared to be related concepts were being assessed by two types of measures, but no definitive conclusions can be drawn.

There is evidence that the objective measures of effectiveness in this research, furthermore, were not as reliable as would have been desirable. It was found, for example, that relatively little objective data were available on inputs, processes, and outcomes at the six institutions studied. Data were often in confidential files, in several offices, or unavailable altogether. Answers to many of the items, consequently, were guesses by the responding administrator, particularly when the data were not readily available or had not been centrally compiled. This objective data gathering made it understandable, in fact, why most studies of higher education avoid multivariate objective data on effectiveness and rely instead on cost ratios.

A second indication of validity was found by comparing scores on the nine effectiveness dimensions of institutions with unionized faculties and those without a union. Figure 3 shows that the institutions with a faculty union (institutions 1, 3, 4, and 6) scored lower than each institution without a unionized faculty (institutions 2 and 5) on four of the effectiveness dimensions: Faculty and Administrator Employment Satisfaction, Professional Development and Quality of the Faculty, Ability to Acquire Resources, and Organizational Health. These findings are consistent with research conducted by Duryea *et al.* (1973), Hedgepeth (1974), Garbarino (1975), Kemerer and Baldrige (1975), and others, which found lower faculty satisfaction, more emphasis on collective bargaining issues and less on faculty concerns, feelings of powerlessness or of being externally controlled, and less collegiality and organizational benevolence in unionized institutions. In terms of construct validity, these relationships between the effectiveness dimensions and other external concepts, *i.e.*, faculty unionism, in predictable directions provides the beginnings of a nomological network that can be expanded with additional research.

CONCLUSION

Multidomain Character of Effectiveness.

Much of the lack of cumulativeness in past effectiveness research has resulted from confusion over what conceptual referent or effectiveness domain has been applied when referring to organizational effectiveness, and from the wide variety of types and sources of criteria used to indicate effectiveness. The emphasis on one best definition of organizational effectiveness that has been common in past literature has not advanced the development of studies of organizational effectiveness either theoretically or empirically. While acknowledging the multidimensional character of organizational effectiveness, researchers continue to

write as if a unitary concept is being considered (Hall, 1972; Mott, 1972; Child, 1974; Hannan and Freeman, 1977; Weick, 1977). In this study it is proposed that since the concept of organizational effectiveness differs with different constituencies, different levels of analysis, different aspects of the organization, and different research or evaluation purposes, effectiveness not only possesses multiple dimensions, but it is not a unitary concept. Rather it is a construct composed of multiple domains which are therefore operationalized in different ways. Effectiveness in one domain may not necessarily relate to effectiveness in another domain. For example, maximizing the satisfaction and growth of individuals in an organization, the domain of effectiveness for Argyris (1962), Likert (1967), Cummings (1977), and others, may be negatively related to high levels of subunit output and coordination, the domain of effectiveness for Pennings and Goodman (1977). Specifically, publishing a large number of research reports may be a goal indicating high effectiveness to faculty members (on an individual level) while indicating low effectiveness at the subunit or organizational level (e.g., poor teaching quality, little time with students, little personal attention for students, graduate student teaching instead of professors) to legislators and parents of undergraduates.

Application of the Approach

This approach to the study of organizational effectiveness is probably most useful as a first step in approaching a fine-grained analysis of effectiveness in colleges and universities. Weick (1974: 366) pointed out that:

We treat effects more crudely than we do causes. If we tried obsessively to discriminate subtle differences in effects, we would probably find more single-cause, single-effect relationships than we now see.

That is, one of the reasons for the lack of theoretical and methodological development in studies of organizational effectiveness is the tendency of researchers to do a fine-grained analysis of causes but a coarse-grained analysis of effects.

It has been discovered that no institution operates effectively on all effectiveness dimensions, but that certain effectiveness profiles are developed in which particular dimensions are emphasized. No single profile is necessarily better than any other, since strategic constituencies, environmental domain, contextual factors, etc., help determine what combination is most appropriate for the institution. Once a profile of effectiveness is identified for an institution, however, a fine-grained analysis of effectiveness can then really be made. That is, once a particular college or university is found to have high effectiveness in Organizational Health and the Ability to Acquire Resources, for example, and low effectiveness in Student Academic Development and in faculty satisfaction, detailed examinations of the causes, correlates, and components of its strengths and weaknesses are possible, whereas no such analyses can be made when general prestige rankings (Cartter, 1966) or internal efficiency ratios (Mood *et al.*, 1972) are relied on.

The instrument used in assessing these nine dimensions of

organizational effectiveness can be the first step in a fine-grained analysis of effectiveness on the institutional level in identifying relevant effectiveness dimensions. The instrument could now be developed into at least nine separate instruments in a fine-grained analysis of each of the nine dimensions in colleges and universities.

This approach to assessing organizational effectiveness also appears applicable to other types of loosely coupled organizations, particularly in the non-profit or public sectors. Rainey, Backoff, and Levine (1976), in reviewing differences between public and private organizations, suggested that one major difference lies in the availability of tangible, specifiable goals. In the private sector, goal accomplishment is more easily recognized, agreed upon, and quantifiable than in the public sector. It is suggested that by inductively deriving criteria, by focusing on organizational attributes rather than operationalized goals, and by carefully selecting sources and types of criteria to indicate effectiveness, important dimensions of effectiveness can be identified which can lead to more fine-grained analyses of public sector organizations.

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Measuring organizational effectiveness in institutions of higher education. *Administrative Science Quarterly* 23: 604-632. Google Scholar. Cameron, Kim (1980). Critical questions in assessing organizational effectiveness. *Organizational Dynamics* 9: 66-80. Google Scholar. Cameron, Kim S. (1981). Domains of organizational effectiveness in colleges and universities. *Academy of Management Journal* 24: 25-47. Google Scholar. Cameron, Kim S. (1986). Effectiveness as paradox: Consensus and conflict in conceptions of organizational effectiveness. *Management Science* 32: 539-553. Google Scholar. Cameron, Kim S. (1981). Measuring organizational effectiveness in institutions of higher education. *Administrative Science Quarterly* 23: 604-632. Google Scholar. Cameron, K.S. (1981). Domains of organizational effectiveness in colleges and universities. *Academy of Management Journal* 24(1), 25-47. Google Scholar. Cameron, K.S. (1986). Taxonomies of higher educational institutions predicted from organization climate. *Research in Higher Education, Journal of the Association for Institutional Research* 31(2), 115-128. Google Scholar. Lyons, A.F. (1990b). Dimensions and domains of organizational effectiveness in Australian higher education. *Higher Education: The International Journal of Higher Education and Educational Planning* 20(3), 287-300. Google Scholar. In this paper we measure variation in postsecondary instructor effectiveness and estimate its relationship to overall and course-specific teaching experience. We explore this issue in the context of the University of Phoenix, a large for-profit university that offers both online and in-person courses in a wide array of fields and degree programs. We focus on instructors in the college algebra course that is required for all BA degree program students. Effectiveness grows modestly with course-specific teaching experience, but is unrelated to pay. Our results suggest that personnel policies for recruiting, developing, motivating, and retaining effective postsecondary instructors may be a key, yet underdeveloped, tool for improving institutional productivity.