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This study utilizes a planning and control model abstracted from the conceptual framework of general management knowledge to test the relative efficiency of administrators in three educational service organizations. The hypothesis that subordinates' perceptions of administrators' relative proficiency will be a function of the administrators' education, training, experience, and conscious use of management techniques appears to be substantiated.

The twentieth century has been a period of dynamic change for organizations in every field: business, governmental, military, educational, religious, and medical. These rapid changes have resulted in new and more viable organizations.[1] Today, these revised organizational models are being subjected to new challenges, and survival is becoming increasingly difficult. A constraint which Wroe Alderson calls "the indivisibility of resources" exists in the external and internal environments of organizations [1, p. 184].

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[1] For example Luthans and Hodgetts state: "The typical university is not a band of scholars teaching a few hundred students but has evolved into a multiversity. An example is the huge State University of New York which has grown from 47,634 students in 1960 to about 150,000 today and is forecasted to reach almost 300,000 within the next several years. The New York system is the largest in the country, but all the 100 plus universities with over 10,000 enrollment are experiencing similar growth patterns." Fred Luthans and Richard M. Hodgetts, "Managerial Analysis of Doctoral Candidates and Professors: Research Attitudes and Interpersonal Relations," *The Academy of Management Journal,* Vol. 12, No. 2 (June 1969), p. 214.

Externally, the recent proliferation of rhetoric concerning environmental conditions indicates that society is nearing the limits of its natural resources and must become increasingly efficient in their management. Internally, the manager is constrained by the availability of men and money to him. Such constraints predicate that administrators be guided by the criterion that results be maximized with limited resources.

Managers of educational service organizations are also challenged by constraints as their organizations grow, both in importance and complexity. While a great deal of study has been devoted to the theory and practice of administration in profit-oriented businesses, very little attention has been given to applying management knowledge to nonprofit educational service systems.

This study was undertaken to determine the degree to which management techniques were employed in selected educational service organizations. The analysis utilized the administrative concepts of planning and control.

THE PLANNING AND CONTROL MODEL

Planning is defined as setting a predetermined course of action. It may be any detailed method, formulated beforehand, for doing or making something—the process of deciding what is to be done and how. For purposes of this study, control is defined as "that phase of the managerial process which maintains organization activity within allowable limits as measured from expectations" [2, p. 468]. The relationship between planning and control is most simply indicated in the statement, "planning makes the rules, control enforces them."

The following model, derived from current management literature, provides a framework for analysis of managerial activities in nonproft organizations:
1. Organizational objectives
    a. Stated fundamental objectives,
    b. Supporting objectives delineating divisional and departmental organization,
    c. Policy constraints within which the organization operates.
2. Organizational plans
    a. Divisional goals in the form of long-range, medium-range, strategic, and entrepreneurial plans,
    b. Operational research or similar forecasting techniques,
    c. Short-range plans, such as budgets, procedures, and tactical plans,
    d. Evidence of decision-making.
3. Organizational control methods
    a. Acceptance of a stated center of power,
    b. Identifiable centers of conferred and derived authority,
    c. Feedback by means of financial controls, reports, and inspection,
    d. Guidelines for control and application of corrective measures.

INVESTIGATION METHOD

The case study method of investigation was employed. The following three largest educational service organizations in a midwestern state were researched: (1) The Division of Instructional Services of the State Board of Education, (2) The Office of the Dean of Faculties at the State University, and (3) The Office of Education of an Archdiocese of the Roman Catholic Church. Separate, in-depth questionnaires, constructed on the basis of the planning and control model, were administered to two upper levels of administrators—managers of divisions and heads of departments.

A total of 23 persons were interviewed—see Table 1 for terms used to identify administrative levels referred to in the study. All interviews were recorded to assure a maximum of objectivity in reporting responses. Investigation of files and reports of the organizations provided additional data for the study.

TABLE 1
Organizational Terms and Levels Referred to in the Study

Terms Used in the Study	Church Organization	University Organization	State Organization
Division	Office of Education	Academic Division, or Office of Dean of Faculties	Division of Instructional Services
Department	Department	College	Section
Manager or administrator (first level of management)	Director	Dean of Faculties, or Vice-President in charge of Academic Affairs	Assistant Commissioner
Department heads or subadministrators (second level of management) Administrators*	Superintendents	Deans	Section Heads

* Refers to managers and department heads, collectively.

Walter B. Miller points out that not all individuals conceive of sources of power in the same fashion; it is important to discover whether the concept of authority internalized by superiors is shared by subordinates [3, pp. 101 and 107]. Study questionnaires were designed to take assumed versus actual authority into account.

The organizations were classic bureaucracies, permitting study of planning and control functions. The basic hypothesis was that administrators may be ranked according to managerial proficiency, as perceived

by subordinates. Rankings assigned managers will depend upon a combination of administrators' education, training, experience, and conscious use of management techniques.

ANALYSIS OF MANAGERIAL PROFICIENCY

To measure a "success" criterion, internalized judgments of first-level managers were tested against apperceptions of immediate subordinates. By means of structured interviews, each of the administrators was tested to determine his experience in five areas of management technology: (1) management training and experience, (2) recognition of common management techniques, (3) usage of management techniques, (4) internalization of organizational objectives, and (5) comprehension of divisional and organizational objectives. The resultant scale of values was used to rank administrative proficiency of managers.

Training and Experience

A majority of the subjects interviewed had taken courses in educational administration. The state administrators, as a group, scored higher than the other two groups in on-the-job experience, averaging three times that of religious and nearly twice that of university administrators.

Religious and state administrators had received seminar or in-house management training; only three of nine deans had received such training. State administrators scored highest in terms of keeping abreast of management knowledge by study of current management literature; deans came next; and religious administrators came last. Of all interviewees, only two state administrators had received special training in operations research techniques. The composite score for state administrators in terms of training and experience was 72.60 points, university deans compiled 38.40 points, and religious educators scored 26.25 points.[2]

Recognition of Selected Management Techniques

A second test was designed to discover the extent to which administrators were familiar with basic management concepts: (1) management by objectives, (2) management by exception, (3) strategic planning, (4) entrepreneurial planning, (5) open- and closed-loop systems, (6) feedback, (7) long-range planning, (8) decisions, (9) policies, (10) goals, (11) objectives, and (12) plans. Respondents who claimed familiarity with concepts were asked to define them. A majority of the administrators comprehended and defined objectives, goals, policies, plans, long-range planning, and decisions. Management by exception and strategic and entre-

[2] In preparing any test or rating scale a degree of subjectivity is present. The author made every effort to select elements for testing which would elicit answers based on objective fact. Test results throughout the study are on the basis of 100 point scales.

preneurial planning were the least understood factors. On this test, state administrators scored a composite 65 points, deans scored 45.0, and religious administrators scored 24.0 points.

Use of Selected Management Techniques

A third test required administrators to demonstrate application of selected management planning tools. The tools were: 1) the critical-path method, (2) program evaluation review techniques, (3) operational research techniques, (4) mathematical techniques (simple accumulation of statistical data in contrast to simulation model building), (5) simulation model building, and (6) the planning-programming-budgeting system. Respondents scored well on nonmodel, mathematical techniques. Administrators scored unusually high on PPBS (possibly because the state legislature required two of the examined organizations to use this technique), but only one in three administrators made use of CPM. There was a further significant drop of proficiency in both PERT and OR techniques—one in five administrators knew and used these management tools and only one in six made use of statistical model building techniques. For the test, state administrators scored a composite 55 points, university administrators scored 48.4, and religious administrators scored 29 points.

Recognition of Organizational Premises

All administrators in state and religious groups indicated that their organizations had stated major objectives, that objectives were in written form, and that they had read the objectives. In response to the same question, only six university administrators could state with certainty that their organization had written objectives.

When asked, "Have you read the objectives of your organization within the past year?", four state and two religious administrators responded affirmatively, and all university administrators responded negatively. When asked to locate written objectives of their organizations, all state administrators, two of four religious administrators and only two of ten university administrators produced copies from their files. The results of this test, for recognition of organizational premises, showed scores of 44.5, 40.0 and 18.0 points for state, religious, and university administrators, respectively.

Correlation between Divisional and Organizational Objectives

An important aspect of leadership is the ability of managers to harmonize divisional goals with those of the larger organization, creating a "linking-pin" effect between the two.[3] Administrators in state and university

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[3] For a complete discussion of the linking-pin function see pages 164-165 and 179-180 in Rensis Likert's *The Human Organization* (New York: McGraw-Hill Book Company, 1967).

divisions agreed that objectives of their managers were in harmony with those of parent organizations, as did three of four religious administrators. In addition, most administrators agreed that there were routine methods for accomplishing divisional objectives within policies of governing boards. While a majority of the department heads agreed that managers were allowed freedom of decision within policy statements, only state sub-administrators had a clear conception of their manager's responsibilities.

In this final predictive test, state administrators scored 45.8 points, the religious group scored 37.5 points, and university administrators accumulated 31.0 points.

The composite scores for the five tests for the groups showed that state, religious, and university administrators scored 56.6, 31.3, and 36.2 points, respectively, on a 100-point scale (see Table 2).

TABLE 2

Managerial Training and Experience of Administrators of Educational Service Organizations: A Predictive Device of Expected Managerial Performance

	Religious Adminis- trators	University Adminis- trators	State Adminis- trators
Managerial training and experience	26.25*	38.4	72.6
Recognition of selected management concepts	24.0	45.0	65.0
Recognition and use of selected management tools	29.0	48.4	55.0
Recognition of organiza- tional premises	40.0	18.0	44.5
Demonstrated correlation between divisional and organizational objectives	37.5	31.0	45.8
Composite average	31.3	36.2	56.6

 * Proficiency rating on 100-point scale.

TESTING RELATIVE ADMINISTRATIVE EFFECTIVENESS

According to the predictive device, the state manager should have the best administrative ability, the university manager should rank second, and the religious manager should rank last. This prediction was tested by analyzing the amount of agreement among subordinates regarding their managers' performance in five roles: (1) forecasting, (2) continuous planning, (3) budgetary and short-range planning, (4) conferred and derived power, and (5) leadership.

Managers Forecasting Activities

A majority of department heads stated that their managers attempted to assess what the future would hold for their divisions. When asked

whether their managers used objective tools in attempting to forecast the future, all state department heads, and all except one university subadministrator concurred, while two of three religious department heads responded negatively.

In response to the question: "Does the manager rely on input from department heads for assessing the future?" subadministrators gave the same aggregate responses which they had given to the previous question. The greatest degree of disagreement came in response to the question: "Does the manager rely on input external to the division for assessing the future?" State department heads were in full agreement that their manager used such input, but only four of nine university administrators and one of three religious administrators agreed. For this test, state subadministrators were in complete agreement, and university and religious administrators scored 77.7 and 41.6 points, respectively.

Manager's Planning Activities

The primary element in the planning and control model is planning. State educators were in full agreement that their manager was almost continuously engaged in planning, while only one religious and five university department heads agreed.

Estimates of how far into the future the planning of managers extended indicated that few subadministrators felt that it extended 5 years. A majority of responses indicated managerial planning activities in the medium range. One-third of religious and university department heads saw activities of their managers limited to less than 2 years.

All department heads agreed that their divisions were affected by activities in the external environment, and that their managers followed programs of strategic planning to cope with these forces. A majority of responses indicated that major challenges to divisions came from activities of educational service organizations comparable to their own. All subadministrators stated that federal funding of educational programs was another factor which caused managers to engage in strategic planning.

The concept of entrepreneurial planning was least understood by subadministrators because none of the managers engaged in resource allocation. All department heads agreed concerning their managers' continuous planning activities. University and religious administrators scored only 55.6 percent and 33.3 percent, respectively.

Manager's Budgetary and Short-Range Planning Roles

The planning and control model states that evidence of short-range plans, in the form of budgets, should be found in each of the divisions. The three managers were intimately involved with budgets, and a majority

of department heads agreed that the managers' roles in the budgetary process were crucial.

Organizational short-range plans include guidelines and procedures for dealing with recurring problems at the operational level. All except one department head agreed that managers employed routine methods for accomplishing divisional objectives in harmony with organizational objectives, and that managers employed both tactical planning and decision-making. In this third predictive test, state subadministrators again showed complete agreement concerning their manager's performance. Religious department heads showed 75 percent agreement and university subadministrators 70 percent agreement, respectively.

Manager's Power-Authority Performance

To be viable, control must contain a number of elements, including an authority structure, with a center of power accepted by organization members. All department heads acknowledged the authority of managers, even though less than one-half had knowledge of organizational charts which showed outlines of power-authority relationships.

Official or conferred managerial power is extended by means of manuals spelling out duties of department heads. All except one state subadministrator were familiar with and used such manuals, while only one-third of university and religious department heads knew that manuals of duties existed for their divisions.

In response to the question regarding whether there were written standards by which performance of department heads was judged, all state and two religious subadministrators agreed that there were such standards. No university department head felt that there were objective standards used for judging his performance. However, when questioned regarding whether managers did, indeed, judge their performance, university and state administrators were in full agreement that performance evaluation was taking place, while only two religious administrators concurred. The results of this series of questions indicated that state, university, and religious subadministrators scored 90.8 percent, 45.6 percent, and 36.9 percent agreement, respectively.

Manager's Leadership Role

To determine whether department heads accepted their manager's total leadership role, subadministrators were asked: "Do you feel that your manager is both the formal and informal head of the division?" All department heads responded affirmatively.[4]

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[4] This seeming note of confidence in the managers should be tempered with the observation that a number of department heads indicated that they listed their manager as both the formal and informal leader simply because there was no one else to turn to for the kind of help they really needed.

Further, department heads stated that managers granted relative decision-making freedom and tended to apply control at selected points. One selective control device is the budget—all subadministrators stated that managers used budgets to control their activities.

A manager may increase his power by requiring subordinates to report on program progress. State subadministrators had a high degree of interaction with their manager for reporting purposes—all administrators, except one, contacted him daily. Four university subadministrators indicated that they were in daily contact with their manager, and one religious department head stated that he was in conference with his manager "up to ten times a day."

Formal and informal meetings provide a method by which managers may exercise control over subordinates by requiring that reports of activities be made during meetings. Department heads in all divisions reported regular, formal group meetings.

A final question used to test the degree to which managers were able to exercise control over subordinates was: "To what extent will the evaluation of your manager affect your tenure?" One-half of the state subadministrators indicated that their manager would be able to gain their dismissal. None of the university and only one of the religious department heads felt that their manager had the power necessary to affect dismissal.

In this test of a manager's leadership role, consensus of agreement among state, university, and religious subadministrators was 77.0, 68.8, and 61.6 points, respectively. Composite scores for the five segments of the test of administrative effectiveness were 93.5, 63.5, and 49.7 for the state, university, and religious managers, respectively (see Table 3).

RESULTS

While Table 2 is a predictive device predicating expected managerial performance, Table 3 is designed to show the degree to which subordinates perceived manager's use of selected management planning and control tools. Composite tabulations recorded in Table 2 show that state administrators accumulated a score of 56.6 points, university administrators accumulated 36.2 points, and religious administrators scored 31.3 points.

According to this predictive device, the state manager should have been ranked highest in administrative ability, the university manager second, and the religious manager last. The scores in Table 3 indicate that this was the case—the state manager was scored first with 93.5 points, followed by the university administrator with 63.5 points, and the religious manager with 49.7 points.

TABLE 3
Administrator's Assessments of Manager's Managerial Activities:
A Test of the Predictive Device of Expected Managerial Performance

	Religious Adminis- trators	*University Adminis- trators*	*State Adminis- trators*
Planning			
Agreement concerning manager's forecasting activities	41.6*	77.7	100.0
Agreement concerning manager's continuous planning activities	33.3	55.6	100.0
Agreement concerning manager's budgetary and short-range planning role	75.0	70.0	100.0
Control			
Agreement concerning manager's power- authority performance	36.9	45.6	90.8
Agreement in perception of manager's leadership role	61.6	68.8	77.0
Composite averages	49.7	63.5	93.5
Expected prediction, 166% x 56.6	51.9	60.1	93.5
Points of variation	−2.2	+3.4	0.0
Percentages of variation	−2.3	+3.5	0.0

* Percentages quoted on a 100-point scale.

In order to test the models in Tables 2 and 3, the results must be placed on a statistically comparable basis. Taking the state manager's scores as a base point, the 93.5 points score listed in Table 3 is 166 percent of the 56.6 points listed for him in Table 2. This percentage was applied to scores accorded university and religious administrators in Table 2. To be in conformity, the expected scores for state, university, and religious administrators in Table 3 should be 93.5, 60.1, and 51.9 points. Actual scores were 93.5, 63.5, and 49.7 points, respectively. This is a difference of plus 3.4 points (or plus 3.5 percent) on the part of university administrators, and minus 2.2 points (or minus 2.3 percent) from the expected norm of the predictive model on the part of religious administrators.

These results indicate that, when compared to results expected of the state manager on the basis of our predictive model, the university manager scored slightly higher than expected and the religious manager scored slightly lower. Assuming the validity of the predictive and testing modes used, assumptions made in the premises of the study would appear to be substantiated.

IMPLICATIONS

The study uncovered several interesting results. First, it was found that there was a relationship between an administrator's formal managerial training and job experience and subordinates' perceptions of the manager's effective use of planning and control activities. Second, the manager's ability to lead effectively was found to be contingent on his knowledge of organizational goals and his ability to link divisional goals with those of the larger organization. Finally, leadership of managers in the service organizations was found to be seriously undermined by lack of parameters clearly defining their authority.

Results of the study have several implications for nonprofit organizations. First, there seems to be a need for expanding managerial training of administrators. This may be accomplished by setting training requirements for administrators and by providing opportunities for management education. Second, managers should not be removed from positions before they have had an opportunity to make a maximum contribution to the organization. Third, administrators should be required to review annually the objectives of the organization. In addition, they should be required to demonstrate a correlation between divisional and organizational goals and show that they communicate these goals to subordinates. Fourth, authority of managers should be strengthened by defining areas of jurisdiction in policy manuals. A manager's authority might also be increased by spelling out responsibilities of subordinates, giving managers objective standards by which to judge subordinates' performance. Finally, nonprofit educational service organizations must supply managers with adequate staff support. Unless this is done, the training, experience and resourcefulness of the manager will be dissipated in the performance of routine activities.

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