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**A COMPARISON OF STRATEGIC DECISION TASK
VARIABLE ANALYSIS BETWEEN SCHOOL
AND BUSINESS EXECUTIVES**

by

Peter A. Behnke

**A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Doctor of Education
Department of Educational Leadership**

**Western Michigan University
Kalamazoo, Michigan
June 1993**

A COMPARISON OF STRATEGIC DECISION TASK VARIABLE ANALYSIS BETWEEN SCHOOL AND BUSINESS EXECUTIVES

Peter A. Behnke, Ed.D.

Western Michigan University, 1993

The purpose of this study was to examine the differences between school and business executives when making strategic decisions through a comparison of task variable analysis skills. The hypothesis for the study was: After reading a case study describing a strategic decision-making situation, business executives will have more correct responses than school executives on an author written evaluation instrument. The evaluation instrument was designed to measure the subjects' analysis skills of 10 different decision-making task variables.

Thirty Wisconsin school district superintendents and 30 business executives were randomly selected to participate in the study. The results indicated that the difference between the task variable analysis skills of school executives and business executives was not significant at the .10 level and the study's hypothesis was rejected.

Statistically significant differences were found in the analysis skills for some individual task variables. Business executives showed significantly better analysis skills on four task variables: functionary and accuracy, source and currency of information. The school executives did significantly better than business executives on two task variables: focus of accountability and frequency of use.

A further examination of the executives' number of years of experience, number of employees in their organization, and the organizational setting also indicated that the differences in analysis skills between the school and business executives were not statistically significant. The study's results and conclusion led to four recommendations including additional training for both business and school executives in task variable analysis skills, caution in using business executives as presenters for school executive training, restraint in adopting private sector management models, and more clarification concerning the role of school executives in education reform movements such as site-based decision making.

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between school and business executives**

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Western Michigan University, 1993

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DEDICATION

To Mary Ann, without whose inspiration and encouragement this study would not have been possible.

Peter A. Behnke

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CHAPTER I

THE PROBLEM

Introduction

School reforms have been heavily influenced by ideas initiated in business. The field of educational administration originated from the scientific management movement in the early 1900s. Since then educational administration has evolved in close conformity with succeeding schools of management thought.

American schools and businesses have experienced unprecedented pressures for change during the past two decades. At the conclusion of World War II, the preeminent position and economic strength of American businesses assured profits regardless of quality. Layers of bureaucracy limited decision making to planners and owners isolated from most employees. Strategic, long-range planning was often ignored in order to maximize immediate profits (Sarason, 1991). As a result of intense foreign and domestic competition, businesses began responding to the calls for change in the 1980s (Doyle, 1992).

School executives have also neglected strategic planning and made decisions isolated from teachers and staff. Further, school executives immune to the pressures of competition experienced by business executives were slow to respond to calls for reform and restructuring.

School executives are now facing additional external influences such as an increasing number of students attending conventional

not-for-profit schools. In addition, a growing number of for-profit business providers have entered the education market and home schooling is being viewed as an educational option by a growing number of parents (Doyle, 1992).

Reform movements have focused on a variety of philosophies and methodologies including but not limited to total quality management, strategic planning and related processes such as nominal groups and Delphi techniques, and site-based management or shared decision making. The common theme in all of these programs is the need for participants who have decision-making, problem-solving, and analysis skills.

The primary tenet of restructuring is participation in decision making based on the premise that people who have a voice in the decision-making process have a greater ownership for the overall educational process. Initially, teachers were the focus of the educational reform movement. The assumption is that shared decision making is not possible unless teachers are trained in problem analysis and decision making. Based on this assumption, emphasis has been placed on training teachers to assume authority and decision-making responsibility.

School reform and restructuring also require the leadership of well-qualified school executives who have often been neglected by staff development programs (Bowles, 1989). As a result of uncertainty and misinformation, administrators have been concerned about loss of authority and sharing of responsibilities undermining the success of school restructuring (Sarason, 1991).

At the same time schools are experiencing the pressures of change; there is a shortage of qualified school executives. In addition to severe shortages of minority and female school executives, over half of all superintendents are within 7 years of retirement and half of all principals will retire in the next 5 to 8 years (Feistritz, 1989). Recruitment of new school executives is complicated by the difficulties associated with the position which includes limited control, pressure for quick results, inexperienced and intrusive board members, as well as invasion of privacy (Daley, 1990).

School executives are needed who are capable of scanning the environment, thinking strategically, asking the right questions, collecting and synthesizing useful data, and anticipating problems (Murphy, 1991). The problem-solving or decision-making skills of both business and school executives are critical to their respective organizations as they face the challenges of change.

Statement of the Problem

In this study the task variable analysis skills of school and business executives in decision-making situations were compared. The analysis of task variables is important first to recognize decision processes as either operational, tactical, or strategic and second to determine the appropriate action necessary to address the decision process.

Strategic decisions are ill-structured, nonroutine, complex, and impact organizations significantly. Each strategic decision requires large commitments of resources which could result in substantial gains or losses. Environmental trends, competition, and organizational values,

strengths, and weaknesses influence decision making.

School and business executives can improve decision-making skills by recognizing and evaluating task variables influencing the decision process. Accuracy, scope, and type of information, time horizon, and functionary are examples of task variables useful in differentiating between trivial operational decisions and complex strategic decisions (Keen & Morton, 1978).

Faced with strategic decisions, executives can apply a rational methodology which involves listing alternative courses of action and examining consequences that could result by following each possible course of action (Simon, 1976). Often executives are forced into oversimplifications as a result of limitations on processing, intrusion of bureaucratic politics, and psychological stress (Janis & Mann, 1977).

Although executives attempt to identify the optimal solution, resource constraints limit the decision-maker's ability to search the complete set of solutions. Executives may instead seek solutions which minimize the problem while using allowable levels of resources or select the first course of action that meets minimum criteria for an acceptable solution (Simon, 1976). The resulting satisficing strategy may be the only process available to executives attempting to simplify complex strategic decisions using limited processing capabilities (Janis, 1989).

Rationale for the Study

Decision making is a central process in both school and business organizations. The nature of the decision-making process determines to a large extent the structure of the organization (Griffiths, 1959). The

work of executives is complex. Events are not sequential, circumstances are ill-defined, and organizational goals and values are often in conflict (Schwenk, 1988). Organizational problems are emergent requiring creative, generative solutions (Tanner & Tanner, 1987).

Preparation programs for school executives suffer from problems in recruitment, content of training, and delivery system. Prospective school leaders are self-selected. Recruitment programs for school executives are limited and program admission standards are lax. Preparation programs lack coherence, rigor, and standards. Delivery systems are connected more with preparation programs for the arts and sciences than with the needs and interests of practitioners in the educational field (Hallinger & Murphy, 1991).

Training for school executives has been based on two underlying assumptions. First, more emphasis must be placed on training school administrators in decision-making and problem-solving skills. Second, administrative training can best be accomplished by modeling business methods and in some cases by using business executives as trainers.

During the 1980s, in-service training for school executives experienced an unprecedented level of expansion (Hallinger & Murphy, 1991). School executives have reported reduced feelings of isolation from peers, increased knowledge about the field, and gains in skills; however, little systematic evaluation has been conducted to measure gains in either knowledge or skill levels (Wildman, 1989).

Research supports the need for school executives at both the district and building levels trained in problem-solving, planning, and decision-making skills in order to successfully address internal and

external issues. However, there is a need to compare the decision-making skills of school and business executives in order to determine the validity of the assumption that school executives should employ business concepts and receive training from private sector.

The prevailing popular literature encouraging schools to be more like businesses has profound implications for school executives, since it is based on the unsubstantiated belief that business executives are better decision makers and problem solvers than school executives. This study addresses this assumption by comparing the strategic decision-making skills of school executives and business executives.

Hypothesis

The hypothesis for the study was: After reading a case study describing a strategic decision-making situation, business executives will have more correct responses than school executives on an investigator-written evaluation instrument designed to measure task variable analysis skills.

Definitions of Terms

Business executive: a line officer of either a goods producing or service producing industry.

School executive: a superintendent or district administrator of a school district.

Decision making: a process beginning with the identification of an issue, culminating with the selection of an alternative solution, and resulting in a commitment to action.

Task variable: factors used to evaluate a decision process and include accuracy of information; level of detail; time horizon; frequency of use; sources, scope, type, and currency of information; functionary; problem category; and focus of accountability.

Operational decisions: type of decision which occurs most frequently; uses current or historical information; requires detailed, specific, internally generated data; and is made by a supervisor.

Tactical decisions: type of decision which is made within the context of organizational policies and objectives, focuses on improvement, and is made by a manager.

Strategic decisions: type of decision which affects an organization's objectives; influences an organization's acquisition, use, and disposition of resources; and is made at the executive level.

Assumptions

The following assumptions may be applicable in this study:

1. The task variable analysis skills of the business executive population are consistent and homogeneous minimizing sample variance.
2. Task variable analysis skills of the school executive population are consistent and homogeneous minimizing sample variance.
3. Disproportionate sampling will not be necessary because the limited number of large school and business organizations will not influence the results of the study.
4. A simulation of a hypothetical case study of a decision-making situation will enable school and business executives to analyze task variables.

Limitations

The following limitations are recognized in the study:

- 1. Only accessible and cooperative subjects respond to surveys.**
- 2. Surveys arouse "response sets" such as acquiescence or a proneness to agree with positive statements or questions.**
- 3. Survey items may be interpreted differently than intended.**
- 4. Subjects may not actually complete the survey.**
- 5. Complete return rate for all surveys is difficult to achieve affecting the completeness of the sample.**
- 6. Subjects may be limited in providing opinions due to survey design.**

Organization of the Study

An introduction to this study, statement of the problem, need and rationale for the study, hypothesis, definitions of terms, assumptions, limitations, and organization of the study have been presented in Chapter I. A review of selected literature on decision making and research methodology used in the study of decision making is examined in Chapter II. In Chapter III the research procedures, including case study development validation; selection of subjects; instrumentation; field procedures; data collection, organization, and categorization; and statistical analysis, are described. The data and findings for the stated hypothesis are presented in Chapter IV. Conclusions and recommendations are presented in Chapter V.

CHAPTER II

REVIEW OF LITERATURE

In this chapter related decision-making literature is reviewed. The chapter is divided into two sections: The Nature of Decision Making and Research Methodology in Decision Making. The first section, The Nature of Decision Making, contains four subsections: Decision Making, Decision Maker, Decision Processes, and Strategic Decision Models. The second section, Research Methodology, contains three subsections, Cognitive Psychology Research Methodology, Social Psychology Research Methodology, and Management and Political Science Research Methodology.

The Nature of Decision Making

Decision Making

Definitions

A decision is a choice between alternative solutions. Decision making has been defined as a process of thought and action culminating in choice behavior (Kassouf, 1970; MacCrimmon & Taylor, 1976). Decision making has also been defined as a process which begins with the identification of an issue and ends with the selection of an alternative solution (Nutt, 1984). An additional definition of decision making is a commitment to action (Mintzberg, Raisinghani, & Theoret, 1976).

In contrast, Cohen, March, and Olsen (1972) defined a decision phenomenologically, that is, a decision is a post factum construct produced by the participants. Decision processes are considered as important as decision outcomes, since decisions influence participant status, reinforce organizational values, and allow for the exchange of information (Pinfield, 1986).

A decision is rarely a choice between obvious right and obvious wrong alternative solutions. Decision situations are governed by external factors. Risk is always present. Compellingly good or impossibly bad alternative solutions do not afford choice (Mann, 1976).

Decision making requires evaluating alternative solutions which can become complex due to large numbers of factors, more than one decision maker, multiple attributes, and uncertainty about the value of alternative solutions (Holloway, 1979). Decision making only becomes necessary when the leader faces multiple attributes, objectives, criteria, and functions (Starr & Zeleny, 1982).

Decision Types

Three types of decisions are recognized in the literature: operational, tactical, and strategic (Sutherland, 1977). Although the categories overlap forming a continuum, the decision types can be differentiated using task variables and organizational attributes.

Operational Decisions. Operational decisions occur most frequently and are deterministic; use current or historical information; and require detailed, specific data. Operational decision makers use

internally generated, quantitative information. The analytical modality is algorithmic.

Supervisors are the functionaries in operational decisions. Because the tasks, goals, and resources are carefully defined, little judgment is required. Accountability is measured by productivity.

Tactical Decisions. Tactical decisions require considerable interpersonal interaction, are made within the context of the policies and objectives developed in the strategic planning process, and focus on improvement. Tactical decisions have a lower degree of frequency than operational decisions and are moderately stochastic. Less detailed, specific information is required. The analytical modality is inductive and or projective (Anthony, 1965). The manager is the functionary in tactical decisions with responsibilities which include logistics, short-term planning, and forecasting.

Strategic Decisions. Strategic decisions have an influence on the organization's objectives; on changes in the objectives; on the resources used to accomplish the objectives; and on the politics governing the acquisition, use, and disposition of resources. Strategic decisions are ill-structured and nonroutine, important to the organization, and complex.

Strategic decisions are made less frequently than either operational or tactical decisions and are more severely stochastic. Strategic decisions involve the future and often cover a wide range of uncertain and ill-defined variables. As a result, strategic decisions have a low degree of accuracy. Strategic decision making requires aggregated information and uses external sources of relatively dated, qualitative information.

Strategic decisions are based on goals established by directors and officers of the organization. The strategic decision maker has two functions: establish the objectives to meet the organization's goals and develop activities necessary to achieve the organization's objectives. Factors which impede progress towards the objectives and hostile environmental factors influence organizational activities. Strategic decision makers must consider alternative solutions before committing to a specific course of action (Sutherland, 1977).

Task Variables and Organizational Attributes

Task variables can be expressed using a range of values along a continuum defined by operational decisions on one extreme, strategic decisions on the other extreme, and tactical decisions located at an intermediate point. The following is a list and description of task variables associated with decision-making processes (Keen & Morton, 1978; Sutherland, 1977):

Accuracy of information: Operational decisions have current time frames which require accurate information. Strategic decisions involve future planning with uncertain variables resulting in relatively low accuracy of information.

Level of detail: Operational decisions require detailed, specific information. Strategic decisions use aggregate data.

Time horizon: Strategic decisions have a future orientation. Operational decisions focus on present or historical events.

Frequency of use: Strategic decisions are made infrequently. Tactical decisions are made more frequently, and operational decisions

are made on a daily, weekly, or monthly basis.

Sources of information: Strategic decisions require information from external sources such as governmental agencies and competitors. Operational decisions use internal sources of information.

Scope of information: In strategic decision making the scope of information is broad involving a range of variables and factors. Operational decision making has a narrower focus of variables.

Type of information: Operational decision making is more quantitative. In strategic decision making the information is more qualitative.

Currency or age of information: In operational decision making highly current information is crucial. In strategic decision making more dated information may be used to indicate trends or patterns.

Functionary: Operational decisions are made by supervisors. Managers make tactical decisions, and executives typically make strategic decisions.

Problem category: Operational decisions are highly deterministic. Decision making requires that few if any alternatives be considered. Managerial decisions are more stochastic while strategic decisions are severely stochastic.

Focus of accountability: The focus of accountability for operational decision making is productivity. Tactical decision making is evaluated on short-term return. Strategic decision making is measured by the long-range utility.

Selected responsibilities: The responsibility of operational decision making is basic production and support functions within the organization. Tactical decision making focuses on logistics, short-term planning,

and forecasting. Strategic decision making develops from long-range planning.

The Decision Maker

Introduction

An executive is required to make decisions as well as design, regulate, and select social systems that facilitate decision making (Simon, 1965). In particular, an executive decides how much to involve members of the organization in the decision process (Vroom & Yetton, 1977).

An executive is involved in every significant decision made by an organization. As the formal authority only the executive can commit the organization to new courses of action, best insure that decisions reflect organizational values, and most easily integrate and implement strategic decisions (Mintzberg, 1973).

Decision making can occur in either an individual or a group context depending on the leadership style of the decision maker and the type of problem initiating the decision process. Individual decision making is a cognitive process while group decision making involves both cognitive and social processes (Vroom & Yetton, 1977).

Problem Types. Problems can be categorized as either discrete or emergent. Discrete problems are characterized by unambiguous, quantifiable elements, by solutions that require a logical sequence of acts which can be performed by one individual, and by discernible boundaries. Discrete problems are typically the focus of operational and or

tactical decision-making processes.

Emergent problems have elements which are ambiguous and uncertain, solutions which require the interaction of a number of individuals, and dimensions which are initially unknown, but become more defined over time. Strategic decision processes are used to address emergent problems. Emergent problems should be considered by a group of decision makers who possess the knowledge for solving the problem and who will be responsible for implementing the solution after the decision process is complete (Owens, 1987).

Decision-Maker Leadership Style. Likert (1967) proposed four management systems which form a continuum based in part upon the degree of participation in the decision process. Exploitive-authoritative systems are top-down decision-making systems. In benevolent-authoritative systems the decision-making processes are top-down; however, informal upward and lateral communication enables the executive to receive feedback about the implementation of the decision. In consultative-management systems the leadership hierarchy of the organization is responsible for strategic decision making while middle management and supervisory personnel are encouraged to participate in operational and tactical decision making. In participative-group systems all pertinent groups are involved in operational, tactical, and strategic decision making.

Individual Decision Making

Individual decision making is influenced by the amount of relevant information available, by the ability to use this information, and by personal tastes or preferences regarding possible courses of action (Nitzan & Paroush, 1985). Initially, an executive must establish an effective decision process for the organization (Griffiths, 1959). When a decision process is in place, the executive is required to make few decisions personally; however, the decisions made by the executive will have a major impact on the organization.

The executive's control rests not so much on personally making numerous decisions as in controlling the means by which decisions in organizations are made. Executives relieve the pressure of decision making by concentrating, quantifying, delegating, and legislating (Weissel & Cowley, 1969). Individual decision making is best used to address operational and to some extent tactical decision processes.

Participative Decision Making

In the case of strategic decisions which have many alternative subtasks a decision produced by a group will be superior to one produced by an individual provided the elements are not easily conceptualized, one person can do one subtask without interfering with another, and efficiency depends on continued coordination and interaction of a number of persons. Participative decision processes are more productive and enhance organizational member satisfaction and sense of identity (Schmuck & Blumberg, 1969). Groups employing interactive decision

processes produce better results than groups employing nominal or statistical procedures (Burleson, 1984).

Strategic decision making by group consensus is an effective form of participative decision making for three reasons: (1) Two-way communication and pooling of knowledge are encouraged, (2) shared competencies and knowledge are brought to bear on a problem, and (3) commitment to implementation is increased because of involvement in the decision process (Tannenbaum & Schmidt, 1973). Consensus means that participants can paraphrase the issue to show understanding, participants have a chance to express opinions about the issue, and participants who continue to disagree will give the decision an experimental try for a prescribed period of time (Schmuck, 1972).

Group decision making is more complicated than individual decision making. Homogeneity of preferences is assumed; however, heterogeneity of skills optimizes the group decision process (Nitzan & Paroush, 1985). Executives must gain consensus and maintain organization equilibrium, develop a synthesis of the social and partisan perspectives of power and discontent, assess power and identify influentials in decision-making processes, consider political realities, and present a solution that minimizes ambiguity (Holifield, 1986).

Decision Processes

Definitions

Decision making requires a process. The purpose of the decision process is to maximize utility which is defined as the power to satisfy

individual and or organizational wants. Utility is subjective.

A strategic decision process is comprised of a set of activities that begin with the identification of an issue and end with an action (Nutt, 1984). Issues are identified through head-on confrontation, precautionary monitoring, external perturbation, and random searching (Miller & Starr, 1977).

Types of Decision Processes

Decision processes can be further categorized as programmed, semiprogrammed, or unprogrammed processes depending on their degree of ambiguity. The degree of ambiguity in decision processes is a continuous variable which exists whenever the series of steps is not logical or sequential.

Programmed Decision Processes. Because of their repetitive nature, operational decisions can be classified as programmed decision processes. Programmed decision processes are linear and sequential. The structure inherent in programmed decision processes precludes ambiguity. Because of the routine nature of programmed decision processes, algorithms are developed and applied whenever similar types of operational decisions must be addressed.

Semiprogrammed Decision Processes. Semiprogrammed decision processes range from examples having relatively well-defined steps to examples having a loosely ordered sequence of steps described only in general terms (Gordon, Miller, & Mintzberg, 1975). Semiprogrammed decision processes generally have predetermined procedures which

partially specify the steps in the decision process and provide sufficient structure for managers. Tactical decisions are semiprogrammed decision processes.

Unprogrammed Decision Processes. Unprogrammed or unstructured decision processes are those which have not been previously encountered and for which an explicit set of steps is usually not available (Gordon et al., 1977). Strategic decisions are unprogrammed decision processes.

The executive attempts to reduce the complexity of an ambiguous strategic decision process into either an operational or tactical decision process by dividing an unprogrammed decision process into a series of semiprogrammed or programmed subdecisions. In addition, the executive tends to use decision strategies such as not extending the decision-making time horizon too far into the future and reducing complex organizational environments into simpler environments in order to further reduce the complexity of strategic decision making to the less ambiguous level of tactical or operational decision making (Mintzberg et al., 1976).

Nature of Strategic Decision Processes

The strategic decision process is characterized by complexity and openendedness. An executive begins with little understanding of the decision situation or the route to the solution. The solution may not be discernible and the means to evaluate alternative solutions may not be clear. A solution is selected only after a recursive, discontinuous

process involving many steps and the interaction of dynamic factors over an extended time frame (Mintzberg et al., 1976).

Strategic decision processes have been characterized as rational, analytical problem solving which include listing, examining the consequences of, and comparing the value of alternative solutions (Cyert & March, 1963; March & Simon, 1958). Such characterizations are limited because two premises are assumed: An executive is aware of and has complete knowledge of the consequences of all alternative solutions (Simon, 1976).

Components of strategic decision processes are changing and evolving. Alternative solutions are added and removed. The criteria for evaluating alternative solutions as well as the relative importance of alternative solutions are not constant throughout the decision process (Starr & Zeleny, 1982).

Janis (1989) proposed that executives engage in an approximation of rational strategic decision processes called vigilant problem solving. This decision process is characterized as fully using limited abilities, within the confines of available organizational resources, and exercising caution to avoid mistakes in the essential tasks of information search, deliberation, and planning.

Strategic Decision Models

Definitions

A strategic decision model is a representation of a decision process which has been relatively well-defined using methodology such as

flowcharts, mathematical notation, and computer programs (Gordon et al., 1975). A strategic decision model must incorporate the dynamic nature, complexity, and fluctuating uncertainty of strategic decision processes (Starr & Zeleny, 1982).

Types of Decision Models

Dewey (1910) proposed a three-stage problem-solving model: defining the problem, listing alternative solutions, and evaluating alternative solutions. Dewey (1933) later incorporated the problem-solving model into his five phases of reflective thought: (1) searching for a possible solution, (2) rephrasing the decision situation into a problem statement or question, (3) developing of hypotheses, (4) reasoning or elaborating on the hypotheses, and (5) testing of hypotheses.

Additional three-step decision models have been proposed (Cyert, Simon, & Trow, 1956). In this model executives, when confronted with alternative solutions, determine consequences for and rank the alternative solutions using a predetermined system of preferences.

The intelligence-design-choice trichotomy was postulated by Simon (1965). A six-stage model which includes problem awareness, problem definition, developing alternative solutions, evaluating alternative solutions, implementing a plan, and evaluating results has also been proposed (Hurst Kineery, & Weiss, 1983).

Mintzberg et al. (1976) described a decision-making framework with three distinct phases defined by seven routines and no sequential relationship between the phases. The identification phase includes decision recognition and diagnosis. The development phase contains the

search and design routines. The selection phase involves a screen routine, evaluation-choice routine, and authorization routine.

Strategic Decision Strategies

Normative or prescriptive strategies use algorithms, well-defined mathematical steps, to determine the optimal solution. By comparison, descriptive strategies use heuristics, general guidelines or protocols developed from experience, to determine satisfactory solutions. A normative strategy considers which processes should be used to make a decision, while a descriptive strategy considers which processes would be used to make a decision (Vroom & Yetton, 1977).

Alternative solutions are restricted to choices which do not violate state and federal statutes and regulations, undermine school relations, or are contrary to formal or informal organizational policy (Miller & Starr, 1977). Decision-making strategies are used to choose between the remaining alternative solutions. Four strategies are proposed: optimizing, mixed scanning, satisficing, and incrementalism (Janis & Mann, 1977).

Optimization. Optimization is the selection of the alternative solution with maximum utility where utility is the power to satisfy individual and or organizational wants (Miller & Starr, 1977). Optimization requires the determination of the comparative value of alternative solutions in terms of costs and benefits. Optimization is difficult because of limitations on information processing, intrusion of bureaucratic politics, and conflicts in goals.

Suboptimizing is the maximizing of one utility at the expense of alternative utilities (Janis & Mann, 1977). Suboptimization results from limitations on information. Strategic decision processes with limitations on information are classified into one of four categories of decision making: under certainty, with risk, under uncertainty, and with partial information (Miller & Starr, 1977).

Decision making under certainty occurs when only one solution is available for a decision process. Decision making under risk describes decision making when alternative solutions are identified and the probability of the alternative solutions occurring is known to the executive. Decision making under uncertainty is characterized by decision making whenever the probabilities of alternative solutions occurring are unknown. The most common limitation on information in decision processes is decision making under partial information described as situations for which probabilities of some solution alternatives are known while probabilities of other solution alternatives are unknown.

Suboptimization can also result from conflicts between individual roles, between group objectives, and between individual roles and group objectives (Miller & Starr, 1977). Conflicting parochial interests of groups requires executives to consider alternative solutions from a political perspective (Allison, 1971).

Bounded rationality is a suboptimizing strategy which limits the range of acceptable outcomes. Bounded rationality is caused by temporal restrictions, that is, decisions which are considered optimal at one time may not be considered optimal at a later time, the enormous

number of possible choices, and the innumerable factors beyond the control of the executive.

Satisficing. Satisficing is a type of suboptimizing which results when an executive selects an alternative solution which meets a minimal set of requirements (Simon, 1965). The satisficing strategy involves a limited search for information and less cognitive work than maximizing. The use of a satisficing strategy does not preclude considering many alternative solutions, but alternatives are examined sequentially and selected on the basis of a single formula or criterion.

Satisficing and optimizing are on opposite extremes of the decision-making continuum. Satisficing differs from optimizing in four dimensions: (1) number of objectives to be met, (2) number of alternative solutions generated, (3) ordering and retesting of alternative solutions, and (4) types of testing models used. The degree to which the four requirements are met determines the position of the decision process on the continuum (Janis & Mann, 1977).

Incrementalism. Elimination by aspects and incrementalism are variant satisficing strategies. Elimination by aspects uses a set of multiple decision rules rather than a single criterion for selecting a solution alternative (Tversky, 1972). Incrementalism is used when executives are limited to alternative solutions which differ by only a small degree from the present course of action. The incremental strategy uses group consensus and is more concerned with social processes than cognitive processes (Lindblom, 1959).

Mixed Scanning. The third decision-making strategy, mixed scanning, is a conglomerate strategy. Mixed scanning uses the cognitive processes of optimizing and elimination-by-aspects approach as well as the social processes of incrementalism. The mixed scanning strategy uses selecting, collecting, processing, evaluating, and weighing information to identify a solution (Etzioni, 1967).

Summary

Organizational problems are complex. Goals must be described in terms of multiple objectives which lead to conflict between internal and external groups and individuals resulting in suboptimization. Although optimality may be impossible to achieve, decision makers guided by past practice in the form of policy and aware of the limitations imposed by bounded rationality can find an acceptable level of suboptimality.

Research Methodology in Decision Making

Introduction

Research methodology used in the study of decision processes is discipline dependent. Cognitive psychologists have directed research efforts on individual decision making by using games and simulations. Social psychologists have studied decision making from a group perspective. Finally, management and political science research have examined organizational decision making through field studies (Mintzberg et al., 1976).

Cognitive Psychology Research Methodology

Cognitive psychologists have investigated well-defined, programmed decision processes (Lindsay & Norman, 1972). The methodology included asking individual decision makers to describe the process or procedures used to address situations posed in games or simulations. Simon and Newell (1972), in their seminal work, presented a human information process system model developed from an analysis of individual decision makers during cryptarithmic and chess.

The result of cognitive psychology studies on individual decision making has led to the development of a conceptual framework for decision support systems which have been highly effective for operational and tactical decision-making situations (Morton, 1971). Expert system software has been developed from decision support systems research on repetitive, highly rational decision-making situations such as medical diagnostic work (Fersko-Weiss, 1985).

Social Psychology Research Methodology

Social psychologists have examined group decision making in controlled laboratory settings (Coch & French, 1948; Lewin, 1951). Research efforts have studied group member interactions including satisfaction of social and growth needs, communication skills, and conflict resolution (Maslow, 1954; McGregor, 1960).

Group decision-making research has concentrated on three facets of decision making: (1) decisions made by minorities or individuals, (2) decisions based on a majority to overrule a minority, and (3) decisions

based on acquiescence and support of the total group after discussion and debate. These three areas of decision making have been used in organizational development applications (Schmuck & Runkel, 1985).

The usefulness of the cognitive psychological research methodology to strategic decision making is questionable for two reasons. First, the focus is on the interaction of the participants rather than on the decision process. Second, because strategic decision making is a complex process, isolating the process in the laboratory eliminates key elements which may limit transference to applications in organizations (Mintzberg et al., 1976).

Management and Political Science Research Methodology

Management and political science research addresses the complexity of decision making in organizations through field studies. Cyert et al. (1956) examined one business firm's decision processes to determine the feasibility of purchasing electronic data processing equipment. Interviews of company executives were used to determine how information was collected and how choices were made between alternative solutions. Additional field studies have examined organizational decision making involving equipment acquisitions (Cyert & March, 1963; Witte, 1972).

Mintzberg et al. (1976) collected data on 25 organizations over a 5-year period. Graduate students were assigned to each organization to study one strategic decision using a prepared list of questions. Decision makers were interviewed and documentation examined. Comparisons were made between observations and theoretical decision-making

models.

Strategic decision making in school organizations has also been examined through field studies. Gore (1956) analyzed 33 federal government decisions made in Washington. Canadian government decision processes were also studied (Pinfield, 1986). Allison (1971) reviewed major governmental policy decisions including the Cuban Missile Crisis, Korean Intervention, and the Japanese decision to attack Pearl Harbor.

Field studies have attempted to compare normative models for individual decision making to the realities of organizational decision making (Mintzberg et al., 1976). Interviews of executives were used to identify significant events in the decision process, find commonalities and sequences, and determine patterns (Nutt, 1984). Content analysis has also been used to further analyze the field study interviews of executives (Daft, 1983).

Studies of strategic decision processes are difficult because strategic processes extend over multiple year time periods, involve more than one decision maker, and have to be conducted after the decision process is complete. Strategic decision processes are examined by observations, by study of organizational records, and by interviews or questionnaires (Mintzberg et al., 1976). Janis (1989) suggested the examination of the records of a group's discussions, memoranda, and participants' personal accounts of the decision process. Janis evaluated the quality of decisions using a predetermined list of seven criteria.

Vroom and Yetton (1977) developed a normative model for determining appropriate leadership styles. The model has been used to reduce the complexities of decision making by describing a taxonomy of

five decision processes and eight related problem attributes. Business executives supplied descriptions of actual problem situations which were developed into case studies. Rules were written using the criteria of the quality of the decision and the acceptance of the decision by other members of the organization. The model represents a research methodology for analyzing decision-making approaches.

Conclusion

Executives must have an understanding of strategic decision processes. Studies of individual decision makers and the dynamics of group processes have improved the understanding of decision processes; however, the methodology has removed the executive from the complexities of the organizational setting. An over-reliance on laboratory-based studies has been minimized through field studies.

Executives rarely encounter decision-making situations in which processes are linear and sequential. On the contrary, decision-making situations are ambiguous and ill-defined. Problems are emergent requiring participation of multiple decision makers. Executives will have to rely on the development of a model which combines the best aspects of both normative and descriptive models of decision making.

CHAPTER III

DESIGN AND METHODOLOGY

The purpose of this study has been to examine the differences between school and business executives when making strategic decisions through a comparison of task variable analysis. The nature and scope of the differences are used to make recommendations for improving the training of school administrators.

Hypothesis

The hypothesis for this study based on a review of selected decision-making literature was: After reading a case study describing a strategic decision-making situation, business executives will have more correct responses than school executives on an investigator-written evaluation instrument designed to measure task variable analysis skills.

Pilot Studies

Introduction

In order to measure the task variable analysis skills of the school and business executives, a fictitious decision-making situation was created. The situation was described to the subjects in the form of a written case study depicting a strategic decision-making process.

Analysis skills were measured by posing 10 extensions of the case study in the form of an attached Case Study Survey. The extensions

were short paragraphs elaborating on the text of the case study and ending with four alternative choices of action. School and business subjects ranked the four alternative choices based on their personal preference and experience.

The content validity of the case study and accompanying Case Study Survey were determined using a panel of authors cited in the study. The predictive validity of the case study and Case Study Survey was measured by a senior-level management class from St. Norbert College, West DePere, Wisconsin. The results of the validation studies were used to revise both the case study and Case Study Survey.

Case Study and Survey Development

The case study was written for the fictitious Greenville Society for the Performing Arts. The case study included a brief historical background and a decision-making situation. A neutral decision-making example was chosen for the case study rather than either a school or business organizational setting. The case study was kept brief to provide sufficient background without discouraging subject participation. A copy of the case study is included in Appendix A.

An instrument was written to collect demographic information about the school and business executives participating in the study and to measure differences between their task variable analysis skills. The first part of the instrument or Case Study Survey contained statements and questions soliciting demographic information on the organizational setting and background of the subjects.

The second part of the Case Study Survey contained 10 items expanding the story line of the case study. Each item was related to a different task variable and was followed by four optional courses of action. Two of the options represented courses of action indicative of a strategic decision maker. The remaining two options represented courses of action preferred by an operational decision maker. The subjects were asked to rank the four optional courses of action in order of personal preference. A copy of the Case Study Survey is included in Appendix B.

Validation of Case Study and Survey

The content validity of the case study and the Case Study Survey were reviewed by a panel of 12 authors cited in this study. The transmittal letter and a listing of the participating authors are included in Appendix C. The authors were asked to read the case study and complete the Case Study Evaluation Form, a copy of which is also included in Appendix C. Eight authors completed and returned the Case Study Evaluation Form.

Table 1 contains a summary of the authors' comments. Of the authors responding, 62.5% agreed that the case study realistically described a decision-making situation and 75.0% stated that the situation represented a strategic decision-making process. In addition, 62.5% of the authors responding indicated that the case study provided enough information to enable a reader to complete the accompanying Case Study Survey.

Table 1
Summary of Author Panel Evaluation Form

Question	Responses	
	Affirmative	Negative
1. Does the case study realistically simulate a decision-making situation?	5	3
2. Does the decision-making situation in the case study represent a strategic decision?	6	2
3. Does the case study provide an adequate amount of information to enable a reader to complete the case study survey?	5	3
Total	16	8

Note. Author panel size = 12. Number of authors responding = 8. Mean affirmative response rate = 66.7%. Mean negative response rate = 33.3%.

Members of the author panel were also asked to complete the Case Study Survey. Six of the panel members completed and returned the Case Study Survey. Table 2 contains a summary of the responses of the panel members to each item in the Case Study Survey. In addition, the Index of Item Difficulty was calculated for each of the 10 items on the survey and is included in the tables. Because of the small sample size, the Index of Item Discriminating Power was not calculated (Gronlund, 1982). Based on the responses of the author panel, both the case study and the Case Study Survey were revised. In particular, Items 1, 2, 8, and 9 were revised based on the low index of item difficulty.

Table 2
Item Analysis Summary of Author Validation Panel

Item	Correct responses	Incorrect responses	Index of Item Difficulty
1	10	14	0.42
2	8	16	0.33
3	12	12	0.50
4	12	12	0.50
5	12	12	0.50
6	12	12	0.50
7	14	10	0.58
8	10	14	0.42
9	8	16	0.33
10	14	10	0.58

Note. Author panel size = 12. Number of authors responding = 6.

The criterion-related or predictive validity of the survey was evaluated using 24 senior management seminar students from St. Norbert College in West DePere, Wisconsin. The students listened to a 30-minute presentation on the types of decision processes as differentiated by task variables and were then divided into two groups.

The first group of students was instructed to read the case study and complete the Case Study Survey considering the situation described in the case study as requiring an operational level decision. The second group of students was instructed to read the case study and complete

the survey considering the situation described in the case study as requiring a strategic level decision.

Table 3 contains a summary of the item analysis for each item on the Case Study Survey as well as the Index of Item Difficulty and the Index of Discriminating Power. The Index of Discriminating Power was determined using the strategic decision student group as the high score group and the operational decision student group as the low score group.

Table 3
Item Analysis Summary of Student Validation Panel

Item	Index of Item Difficulty	Index of Item Discriminating Power
1	0.75	0.25
2	0.54	0.00
3	0.71	0.33
4	0.54	0.67
5	0.48	0.79
6	0.44	0.46
7	0.52	-0.04
8	0.54	0.83
9	0.63	0.50
10	0.42	0.17

Note. Student panel size = 24.

Items with both a low Index of Item Difficulty and a low Index of Item Discriminating Power were considered for revision. Accordingly, Items 2, 7, and 10 on the Case Study Survey were revised.

Selection of Subjects

Subjects were either school executives or business executives. School executives were selected from Wisconsin school superintendents listed in the Wisconsin Department of Instruction School Directory (Wisconsin Department of Instruction, 1992). A stratified random sampling technique was used based on school district enrollments as shown in Table 4. A computer program was written to generate random numbers up to the number of school executives in each of the three enrollment categories.

Table 4
Wisconsin School District Categories
Used for Sample Construction

Enrollment size	Number of districts	Percent
Over 2,000 students	88	20.5
1,000 to 2,000 students	106	24.6
Under 1,000 students	236	54.9
	430	100.0

Alphabetical listings for Wisconsin school districts in each of the three enrollment categories were numbered consecutively. The number

of the Wisconsin school district and corresponding school executive were then selected using the randomly generated numbers. The sample was stratified by selecting the number of school executives from each enrollment category according to the percentages from Table 4.

The business executive sample consisted of chief executive officers or presidents selected from companies listed in Wisconsin Manufacturers and Commerce 1989 edition of the Wisconsin Services Directory. A computer program was again used to generate two random numbers. The first random number corresponded to a page number of the directory. The second random number corresponded to the entry on the page. The organization of the business executive was identified by combining the randomly selected directory page number with the randomly selected entry for that page.

The level of statistical significance in educational studies is generally set at the .05 level (Borg & Gall, 1983). Although lower levels of significance reduce the chance of making a Type I error, the possibility of committing a Type II error increases. Because a .05 level of significance might be counterproductive in an educational setting due to the interaction of many complex factors, a .10 level of significance was selected for this study (Gage, 1978; Isaac & Michael, 1987).

The sample size was calculated for the desired level of significance (see Appendix E). For a two-sample case, the required sample size was 19 for both the school and business executive samples. A 60% response rate was assumed requiring the selection of 30 subjects for each sample (Hinkle, Wiersma, & Jurs, 1988).

Field Procedures

Each subject was mailed a transmittal letter introducing and explaining the significance of the study and letters of endorsement from either Miles Turner, Executive Director of the Wisconsin Association of School District Administrators, or James Morgan, Vice-President of Wisconsin Manufacturers and Commerce, were also enclosed along with the case study and the Case Study Survey. The transmittal letter contained a statement describing the significance of the study, an assurance of confidentiality, and a reminder of the importance of a high response rate. The transmittal letter and letters of endorsement are in Appendix D.

A telephone number was included in the transmittal letter in the event subjects required additional information or directions. A single dollar bill was also enclosed as an incentive for the subjects to complete and return the survey.

Subjects were asked to return the survey within one week in an enclosed stamped and self-addressed envelope. Subjects were also directed to mail the enclosed postcard indicating that the survey had been completed and returned. The postcard maintained subject confidentiality and provided subjects an opportunity to request a summary of the survey results.

A second mailing was made to all subjects who failed to respond to the initial mailing. The second mailing contained an alternate transmittal letter, a case study and Case Study Survey, and a stamped and self-addressed envelope and postcard. A copy of the alternate

transmittal letter is also included in Appendix D.

A follow-up telephone call was made to subjects who did not return the case study survey from the second mailing. A third and final mailing containing the case study, Case Study Survey, and stamped and self-addressed envelope and postcard was sent to those subjects who indicated a willingness to complete the survey.

Data Collection, Organization, and Categorization

A computer program was written by the investigator to determine and tabulate the total number of correct responses and the mean number of correct responses for the survey and for each item on the survey for both the school and business executive samples. A subroutine was included in the computer program to determine the level of significance of the difference between business and school executive sample means. The subroutine used inferential, parametric statistical procedures to determine the standard error of difference, number of degrees of freedom, and t score for the sample means. A sample calculation is in Appendix E.

Summary

Upon completion of the pilot studies, samples of school and business executives were selected using stratified random sampling techniques to read a case study and complete a related survey. An item analysis of survey responses using inferential, parametric statistics was used to determine if differences in the responses from the business and school executive samples were statistically significant.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Introduction

The purpose of this study has been to examine the differences between school and business executives when making strategic decisions through a comparison of task variable analysis. The nature and scope of these differences are used to make recommendations for improving the training of school administrators. This chapter contains information and data describing the findings related to the study hypothesis. The hypothesis was: After reading a case study describing a strategic decision-making situation, business executives will have more correct responses than school executives on an investigator-written evaluation instrument designed to measure task variable analysis skills.

Survey Return Rate and Results

The case study and Case Study Survey were mailed to 30 school executives and 30 business executives. Efforts were made to insure a high response rate in order to maintain the statistical integrity of the stratified sampling. After 7 days a second copy of the case study and Case Study Survey was mailed to executives who failed to respond to the initial mailing. Executives who did not respond to either mailing were called and sent a third mailing.

Table 5 summarizes the response rates from each mailing. A total of 28 school executives responded and all completed and returned the survey. Twenty-seven business executives responded and 22 completed and returned the survey. The response rate of 91.7% and the participation rate of 83.3% exceeded the anticipated return rate of 60% and provided an adequate sample size for the statistical analyses.

Table 5
Case Study Survey Response Rate

Mailings	School executives responding		Business executives responding	
	Returned completed	Returned not completed	Returned completed	Returned not completed
1	17	0	10	2
2	7	0	10	2
3	4	0	2	1
Total	28	0	22	5

Note. Number of business executives in mailing = 30. Number of school executives in mailing = 30. Total response rate = 91.7%. Participation rate = 83.3%.

Data have been presented in table form to facilitate summarization of findings. The findings have been summarized in two sections: the Demographic Findings section and the Task Variable Analysis Findings section.

For the purposes of statistical analysis the samples were considered to be independent. Because the sample sizes were not equal and relatively small, homogeneity of variance was not assumed and the pooled estimate of the population variance was not used for the estimated standard error (Hinkle et al., 1988). The variance was calculated instead using the Cochran-Cox formula (Cochran & Cox, 1957). The number of degrees of freedom was determined using the Satterthwaite formula (Satterthwaite, 1946). The t -test statistic was used to analyze the differences between the school and business executive samples' total number of correct responses for each item on the Case Study Survey. The equations and a sample calculation are in Appendix E.

Demographic Findings

Introduction

School and business executives were asked on the first part of the Case Study Survey to provide demographic information related to their organization and experience level. The information enabled each subject to be properly categorized as either a school or business executive.

The information concerning experience level and organization characteristics also allowed for the consideration of additional relationships between subsets of the samples and their responses to the task variable analysis section of the Case Study Survey. The demographic factors which were examined included: years of experience as a business executive, number of employees in the executive's organization, and geographical location and setting of the executive's organization.

Years of Service

Years of service data are reported and summarized in Table 6 for both the school and business executive samples. The aggregate data for each sample is reported as years of service in the executive's present position and the executive's total years of service with the present organization. The mean number of years of service for each sample was calculated and also reported in Table 6.

Table 6
Years of Service of Participating Subjects

Number of years	Business executives		School executives	
	In present position	Total with organization	In present position	Total with organization
0-5	6	4	9	14
6-10	5	2	7	4
11-15	6	5	8	4
16-20	2	4	4	1
Over 20	3	7	0	5
Mean	12.5	18.7	9.1	9.7

Note. Business executive sample size = 22. School executive sample size = 28.

The business executive sample mean years of service in their present position was higher than the mean years of service for the school executive sample. The business executive sample mean for total

number of years with the organization was also higher than the school executive sample mean number of years with the organization.

Comparisons of executives' longevity in their present position and their overall longevity with their organization are reported in Table 7. The results in Table 7 indicate that 55% of the subjects in the business executive sample had been promoted from within their organization compared to only 25% of the subjects in the school executive sample. Of the subjects in the business executive sample, 41% joined their organization in their present capacity, while 50% of the subjects in the school executive sample reported that their current position was their first position with their organization.

Table 7

Summary of Current Position and Organization Longevity

Years in present position	Business executives	School executives
Greater than years in organization	1	7
Equal to years in organization	9	14
Less than years in organization	12	7

Note. Business executive sample size = 22. School executive sample size = 28.

Number of Employees

The number of employees in the school and business executive samples' organizations is shown in Table 8. Of the organizations represented by the business executive sample, 68% had 100 or fewer

employees. By comparison, 46% of the school executive sample organizations had 100 or fewer employees. The size of the school district in the school executive sample organizations was determined by using a stratified random sampling technique and is representative of the sizes of school districts in Wisconsin.

Table 8
Number of Employees in Organizations
of Participating Subjects

Number of employees	Business executives	School executives
Less than 50	10	2
50-100	5	11
101-200	1	9
Greater than 200	6	6

Note. Business executive sample size = 22. School executive sample size = 28.

Geographic Location of Subjects

The geographic location of the school and business executive subjects is reported and summarized in Table 9. A disproportionate number or 59% of the business executive subjects were located in the southeastern quadrant of Wisconsin. The next most common location was the northeast quadrant of Wisconsin, which contained 27% of the business executive subjects. This distribution corresponds to the

distribution of business organizations in Wisconsin; the greatest concentration of businesses are located in the eastern half of the state.

Table 9
Geographic Location of Participating Subjects

Quadrant location in Wisconsin	Business executives	School executives
Southwestern	2	7
Southeastern	13	8
Northeastern	6	9
Northwestern	1	4

Note. Business executive sample size = 22. School executive sample size = 28.

The geographic distribution of school districts in Wisconsin is more uniform in all quadrants except the northwestern quadrant. The locations of the school districts of school executive sample corresponds to the general distribution of all Wisconsin school districts.

Geographic Setting of Subjects

The geographic setting of the school and business executive sample organizations is summarized in Table 10. Only 19% of the subjects of the business executive sample were located in rural settings compared to 71% of the subjects in the school executive sample. The school and business samples were also different with respect to the urban setting, where 64% of the business organizations were located

compared with only 7% of the school districts in the school executive sample.

Table 10
Geographic Setting of Participating Subjects

Setting	Private executives	Public executives
Rural	4	20
Small city	4	6
Urban	14	2

Note. Business executive sample size = 22. School executive sample size = 28.

Types of Organizations

The types of organizations of the business and school executive samples are reported and summarized in Table 11. All school districts represented in the school executive sample were public organizations. The business executive sample was composed of 95% service organizations and 5% manufacturing organizations.

Summary of Demographic Findings

The demographic information from the school executive sample verifies that the sample is representative of school executives in Wisconsin in terms of their organizational setting, location, and number of employees. In addition, the school executive sample represents the degree of longevity and mobility of school executives in Wisconsin.

Table 11
Type of Organizations of Participating Subjects

Type of organization	Business executives	School executives
Public	0	28
Private manufacturing	1	0
Private service	21	0

Note. Business executive sample size = 22. School executive sample size = 28.

The demographic information of the business executive sample is also representative of the Wisconsin business executive population in all respects with the possible exception of the large proportion of service organizations compared to manufacturing organizations.

Task Variable Analysis Findings

The second section of the Case Study Survey contained 10 items expanding the story line of the case study. Each item was followed by four optional courses of action. Two of the options represented courses of action indicative of a strategic decision maker. The remaining two options represented courses of action preferred by an operational decision maker.

The subjects were asked to rank the four optional courses of action in order of personal preference. Those responses ranked either first or second by the subject were compared to the list of options indicative of a strategic decision maker. Matches were considered as

correct responses. Those responses ranked either third or fourth by the subject were checked against the list of options typical of an operational decision maker. Matches were again considered correct and added to the total number of correct responses.

The number of responses correctly identified as either strategic or operational and the mean number of correct strategic responses were summarized and are reported for both the school executive and the business executive samples in Table 12. The study hypothesis was: After reading a case study describing a strategic decision-making situation, business executives will have more correct responses than school executives on an investigator-written evaluation instrument designed to measure task variable analysis skills.

Table 12
Case Study Survey Responses for Business Executive
and School Executive Samples

Sample	Total responses	Correct responses	Mean
Business executives	880	483	21.95
School executives	1,120	559	19.96

Note. Business executive sample size = 22. School executive sample size = 28. $t = 0.114$, $df = 42.9$. $t (.10, 42 \text{ df}) = 1.303$. Not significant at the .10 level of significance.

The data were analyzed using the t test (see Appendix E). The t score was used to determine if the difference between the mean number of correct responses of the business executive sample and the mean

number of correct responses of the school executive sample was significant at the .10 level. The t score was 0.114 which was not significant at the .10 level and the study hypothesis was rejected.

Given that the business and school executive mean total number of correct responses on the Case Study Survey showed no differences, item means were analyzed to determine whether business executives and school executives responded differently to separate items. Each of the 10 items on the Case Study Survey was related to a specific task variable as shown in Table 13.

Table 13
Task Variables Associated With Case Study Survey Items

Item	Related task variable
1	Source of information
2	Functionary
3	Level of detail of information
4	Scope of information
5	Accuracy of information
6	Type of information
7	Currency of information
8	Time horizon
9	Focus of accountability
10	Frequency of use

The mean number of correct responses of the business executive sample and the school executive sample for each item on the Case Study Survey was calculated and is reported in Table 14. The standard error of measurement, degrees of freedom, and t score were also calculated and reported in Table 14 for each item in order to determine if the difference between the two sample means was statistically significant.

The business executive sample mean number of correct responses for Items 1, 2, 5, and 7 was significantly greater than the school executive sample responses. The task variables associated with these items were source of information, functionary, accuracy of information, and currency of information.

The school executive sample mean number of correct responses for Items 9 and 10 was significantly greater than the business executive sample responses. The task variables associated with these items were focus of accountability and frequency of use.

The results indicate that subjects in the business executive sample were better able to identify important sources of information related to strategic decision making. Subjects in the business executive sample were also better able to recognize that strategic decision making requires less accurate, quantitative information and instead needs to use aggregate, qualitative information.

The functionary task variable item showed the greatest difference between the two samples. More business executive subjects correctly selected the executive board and executive director as the functionary in strategic decision-making processes whereas school executive subjects

Table 14
Case Study Survey Individual Item Responses for Business Executive
and School Executive Samples

Item	Business executive correct response mean	School executive correct response mean	Statistical analysis			
			Standard error of difference	<u>df</u>	<u>t</u> score	Level of significance
1	3.09	2.36	.344	45.8	2.136	.05
2	3.50	2.32	.345	46.7	3.416	.01
3	2.50	2.32	.313	48.0	0.571	>.10
4	2.91	3.14	.364	44.1	-0.643	>.10
5	1.27	0.79	.362	35.6	1.344	.10
6	2.50	2.36	.357	43.3	0.400	>.10
7	2.50	1.89	.329	45.6	1.847	.05
8	1.59	1.36	.298	46.8	0.783	>.10
9	1.36	2.10	.394	46.8	-1.887	.05
10	0.72	1.32	.417	47.7	-1.424	.05

Note. Business executive sample size = 22. School executive sample size = 28. t (.10, 40 df = 1.303).
t (.05, 40 df = 1.684).

identified a committee with a broader base of supervisors and employees as the functionary to make strategic decisions. School executives currently involved in site-based management and shared decision-making reform initiatives may have confused the need for soliciting information from a broader range of groups and the actual functionary in the strategic decision-making process which is the school board and superintendent.

School executive sample responses for accountability and frequency were more related to strategic decision-making options than were the responses of the business executive sample. Again in this case the school reform initiatives may have influenced school executives who have been encouraged to be more focused on surveying the responses of community members to program and policy decisions, while business executives must focus on more internally generated quantitative data. Business executives may also prefer a more immediate and direct review of goals and outcomes rather than waiting for annual or semiannual reviews typical of strategic decision-making processes.

In order to better analyze the responses of the two samples, three additional characteristics of the school and business executives were studied: number of employees in their organization, years of experience in their present position, and the setting of their organization.

Number of Employees

The school and business executives in the study were divided into two subgroups: executives with 100 or fewer employees and executives with more than 100 employees. The number of total responses,

the number of correct responses, and the correct response mean were summarized and are reported for both the school and business executives with 100 or fewer employees in their organizations in Table 15. There was no difference between the mean number of correct responses for the business executive sample and the school executive sample. The t score was 0.042 and was not significant at the .10 level.

Table 15
Case Study Survey Responses of Business Executive and
School Executive Subjects From Organizations
With 100 or Fewer Employees

Sample	Total responses	Correct responses	Mean
Business executives	600	312	20.80
School executives	520	258	19.85

Note. Business executive sample size = 15. School executive sample size = 13. t score = 0.042, df = 25.7. t (.10, 24 df = 1.318). Not significant at the .10 level of significance.

The same information for school and business executives from organizations with more than 100 employees was summarized in Table 16. The t score was 0.135 and was also not significant at the .10 level.

Given that the business and school executive mean total number of correct responses on the Case Study Survey showed no difference, item means were analyzed to determine whether business executives and school executives responded differently to separate items. For each item on the Case Study Survey, the mean number of correct responses of the business and school executive subjects from organizations with

Table 16

Case Study Survey Responses of Business Executive and
School Executive Subjects From Organizations
With More Than 100 Employees

Sample	Total responses	Correct responses	Mean
Business executives	280	171	24.43
School executives	600	301	20.07

Note. Business executive sample size = 7. School executive sample size = 15. $t = 0.135$, $df = 9.6$. $t (.10, 9 df = 1.383)$. Not significant at the .10 level of significance.

100 or fewer employees was calculated and is reported in Table 17 along with the standard error of measurement, degrees of freedom, and t score.

The business executive sample mean for Items 1, 2, and 7 was significantly greater than those for the school executive sample. The task variables associated with these items were sources of information, functionary, and currency of information.

The school executive sample mean for Item 9 was significantly greater than that of the business executive sample. The task variable associated with this item was focus of accountability.

The results showed that business executive subjects were better able to recognize the appropriate functionary in the strategic decision-making process. School executives were again more aware of the need to involve more individuals both internal and external to the organization in the evaluation of decision-making processes.

Table 17
Case Study Survey Individual Item Responses for Business Executive and School
Executive Subjects From Organizations With 100 or Fewer Employees

Item	Business executive correct response mean	School executive correct response mean	Statistical analysis			
			Standard error of difference	<u>df</u>	<u>t</u> score	Level of significance
1	2.93	2.15	.485	25.4	1.606	.10
2	3.40	2.46	.486	21.6	1.932	.05
3	2.60	2.46	.430	24.2	0.322	> .10
4	3.07	3.08	.484	24.7	-0.021	> .10
5	1.33	0.77	.507	23.7	1.113	> .10
6	2.07	2.31	.496	24.3	0.486	> .10
7	2.33	1.69	.432	25.8	1.489	.10
8	1.40	1.69	.387	25.3	-0.755	> .10
9	1.33	2.62	.526	23.4	-2.816	.01
10	0.53	0.62	.406	25.9	-0.202	> .10

Note. Business executive sample size = 15. School executive sample size = 13. t (.10, 22 df = 1.321).
 t (.05, 22 df = 1.717).

The mean number of correct responses of the business and school executive subjects from organizations with more than 100 employees was calculated and is reported in Table 18 along with the standard error of measurement, degrees of freedom, and t score for each item on the Case Study Survey. The business executive sample mean for Items 1, 2, 6, 7, and 8 was significantly greater than those for the school executive sample. The task variables associated with these items were sources of information, functionary, type and currency of information, and time horizon. The school executive sample mean was not significantly greater than the business executive sample mean for any of the items.

Years of Experience

In order to examine if the number of years of experience influenced the responses of the business and school executives, each sample was subdivided into two groups: executives with 10 or fewer years experience and executives with more than 10 years of experience. The number of total responses, the number of correct responses, and the correct response mean were summarized and are reported for both the school and business executives with 10 or fewer years of experience in Table 19.

There was no difference between the mean number of correct responses for the business executive sample and the school executive sample. The t score was 0.035 and was not significant at the .10 level. The corresponding calculations for school and business executives with more than 10 years of experience were summarized and are reported in

Table 18
Case Study Survey Individual Item Responses for Business Executive and School
Executive Subjects From Organizations With More Than 100 Employees

Item	Business executive correct response mean	School executive correct response mean	Statistical analysis			
			Standard error of difference	<u>df</u>	<u>t</u> score	Level of significance
1	3.42	2.53	.480	14.2	1.867	.05
2	3.71	2.20	.486	19.8	3.118	.01
3	2.29	2.20	.445	18.9	0.193	>.10
4	2.57	3.20	.651	9.7	-0.966	>.10
5	1.14	0.80	.481	11.2	0.712	>.10
6	3.43	2.40	.459	12.7	2.243	.03
7	2.86	2.07	.513	13.4	1.542	.10
8	2.00	1.07	.511	10.7	1.825	.05
9	1.86	1.67	.646	10.6	0.295	>.10
10	1.14	1.93	.766	13.9	-1.032	>.10

Note. Business executive sample size = 7. School executive sample size = 15. t (.10, 10 df = 1.372).
t (.05, 10 df = 1.812).

Table 19

Case Study Survey Responses of Business Executive and
School Executive Subjects With 10 or Fewer
Years of Experience

Sample	Total responses	Correct responses	Mean
Business executives	440	235	21.36
School executives	640	328	20.50

Note. Business executive sample size = 11. School executive sample size = 16. $t = 0.035$, $df = 20.8$. $t (.10, 20 \text{ df}) = 1.330$. Not significant at the .10 level of significance.

Table 20. There was no difference between the mean number of correct responses for the business executive sample and the school executive sample. The t score was 0.126 and was not significant at the .10 level.

Table 20

Case Study Survey Responses for Business Executive and
School Executive Subjects With More Than
10 Years of Experience

Sample	Total responses	Correct responses	Mean
Business executives	440	248	22.55
School executives	480	231	19.25

Note. Business executive sample size = 11. School executive sample size = 12. $t = 0.126$, $df = 19.8$. $t (.10, 19 \text{ df}) = 1.328$. Not significant at the .10 level of significance.

The results of the business and school executive subjects from organizations with less than 10 years of experience were analyzed and are summarized in Table 21. The business executive sample mean for Items 1 and 2 was significantly greater than that for the school executive sample. The task variables associated with those items were sources of information and functionary. The school executive sample mean was significantly greater than the business executive sample mean for Item 10. The task variable associated with that item was frequency of use.

The results showed that business executive subjects with 10 or fewer years of experience were better able to select the appropriate functionary to participate in strategic decision-making processes and were more capable of identifying the appropriate sources from which to collect information. School executives with a similar amount of experience were better able to identify the correct frequency of engaging in strategic decision-making processes. The results of this subgroup were consistent with those of the total business and school executive sample.

In Table 22 the individual item analysis for school and business executives with more than 10 years of experience were summarized and are reported. Business executives analyzed the source and currency of information and functionary task variables significantly better than school executives, while school executives better determined the correct focus of responsibility.

The results were again consistent with those of the previous subgroups. The business executives were better able to correctly identify that the proper functionary for making strategic decisions is the board

Table 21
Case Study Survey Individual Item Responses for Business Executive and
School Executive Subjects With 10 or Fewer Years of Experience

Item	Business executive correct response mean	School executive correct response mean	Statistical analysis			
			Standard error of difference	df	t score	Level of significance
1	3.27	2.63	.428	23.9	1.513	.10
2	3.54	2.63	.471	24.8	1.956	.05
3	2.27	2.25	.413	24.9	0.055	>.10
4	3.18	3.13	.472	22.7	0.120	>.10
5	1.09	0.50	.471	15.7	1.254	>.10
6	2.27	2.50	.480	20.2	-0.473	>.10
7	2.09	1.88	.356	24.8	0.606	>.10
8	1.27	1.25	.395	19.8	0.380	>.10
9	1.45	2.00	.551	22.6	-0.990	>.10
10	0.91	1.75	.606	24.5	-1.387	.10

Note. Business executive sample size = 11. School executive sample size = 16. t (.10, 15 df = 1.341).
 t (.05, 15 df = 1.753).

Table 22
Case Study Survey Individual Item Responses for Business Executive and
School Executive Subjects With More Than 10 Years of Experience

Item	Business executive correct response mean	School executive correct response mean	Statistical analysis			
			Standard error of difference	<u>df</u>	<u>t</u> score	Level of significance
1	2.91	2.00	.541	20.0	1.679	.10
2	3.45	1.92	.518	18.6	2.970	.01
3	2.72	2.42	.486	20.4	0.640	>.10
4	2.64	3.17	.566	20.1	0.937	>.10
5	1.45	1.17	.560	17.0	0.514	>.10
6	2.73	2.17	.547	20.5	1.025	>.10
7	2.91	1.92	.548	20.2	1.812	.05
8	1.91	1.50	.458	20.3	0.893	>.10
9	1.27	2.25	.591	21.0	-1.654	.10
10	0.55	0.75	.539	20.8	-0.380	>.10

Note. Business executive sample size = 11. School executive sample size = 12. t (.10, 17 df = 1.333).
 t (.05, 17 df = 1.721).

and executive officer of the organization. The business executives also were more aware of the proper employees and external groups to contact for information necessary for the decision-making process, while school executives were again more aware of the need to involve people internal and external to the organization in the evaluation of the strategic decision-making processes.

Organizational Setting

The third demographic characteristic which was examined was the organizational setting of the business and school executives. Both the business and school executive samples were subdivided by organizational setting into rural and urban subgroups.

The number of total responses, the number of correct responses, and the average number of correct responses were summarized and are reported for both the school and business executive samples from organizations in rural settings in Table 23. There was no difference between the mean number of correct responses for the business executive sample and the school executive sample. The t score was 0.045 and was not significant at the .10 level.

The responses of business and school executives from organizations in urban settings are reported in Table 24. Again, there was no difference between the mean number of correct responses for the business executive sample and the school executive sample. The t score was 0.063 and was not significant at the .10 level.

Since the business and school executive mean total number of correct responses on the Case Study Survey showed no difference, the

Table 23

**Case Study Survey Responses of Business Executive and
School Executive Subjects in Rural Settings**

Sample	Total responses	Correct responses	Mean
Business executives	160	86	21.50
School executives	800	396	19.80

Note. Business executive sample size = 4. School executive sample size = 20. $t = 0.045$, $df = 3.8$. $t (.10, 3 \text{ df}) = 1.638$. Not significant at the .10 level of significance.

Table 24

**Case Study Survey Responses of Business Executive and
School Executive Subjects in Urban Settings**

Sample	Total responses	Correct responses	Mean
Business executives	720	397	22.06
School executives	320	163	20.38

Note. Business executive sample size = 18. School executive sample size = 8. $t = 0.063$, $df = 14.0$. $t (.10, 14 \text{ df}) = 1.345$. Not significant at the .10 level of significance.

means of individual items from the Case Study Survey were analyzed to determine whether business and school executives responded differently. For each item on the Case Study Survey, the mean number of correct responses of business and school executives was calculated and is reported in Table 25 along with the standard error of measurement, degrees of freedom, and t score.

Table 25
Case Study Survey Individual Item Responses for Business Executive and
School Executive Subjects in Rural Settings

Item	Business executive correct response mean	School executive correct response mean	Statistical analysis			
			Standard error of difference	<u>df</u>	<u>t</u> score	Level of significance
1	3.50	2.10	.568	4.95	2.463	.05
2	3.25	2.30	.808	4.02	1.176	>.10
3	2.75	2.45	.793	3.73	0.379	>.10
4	2.75	3.15	.802	3.91	-0.499	>.10
5	1.50	0.90	.984	3.35	0.610	>.10
6	2.25	2.25	.685	4.17	0.000	>.10
7	2.75	1.65	.782	3.54	1.407	>.10
8	1.50	1.50	.557	4.59	0.000	>.10
9	0.75	2.25	.569	5.81	-2.638	.03
10	0.50	1.25	.600	6.03	-1.250	>.10

Note. Business executive sample size = 4. School executive sample size = 20. t (.10, 3 df = 1.638).
 t (.05, 3 df = 2.353).

Only the business executive sample mean for Item 1 was significantly greater than the school executive sample. The task variable associated with Item 1 was the source of information. For the school executive sample, Item 9 was significantly greater than the business executive sample. The task variable associated with Item 9 is focus of accountability.

The results indicated that business executive subjects were better able to include the appropriate employees and supervisors in the information gathering process, while school executives were better able to identify the importance of including a broader base of community members in the evaluation process of the strategic decision.

The analysis of individual items from the Case Study Survey for school and business executives in urban settings was summarized and is reported in Table 26. The analysis skills of business executives were significantly better than those of school executives on three task variables: functionary, accuracy of information, and time horizon. There were no statistically significant differences in analysis skills between the two groups on the remaining seven task variables.

The results are consistent with previous results in this study which have shown that the business executive sample was able to better identify the functionary and types of information necessary in strategic decision-making processes. In addition, the business executives in urban settings were better able to identify that strategic decision-making processes have a time horizon of from 1 to 3 years.

Table 26
Case Study Survey Individual Item Responses for Business Executive and
School Executive Subjects in Nonrural Settings

Item	Business executive correct response mean	School executive correct response mean	Statistical analysis			
			Standard error of difference	df	t score	Level of significance
1	3.00	3.00	.477	15.5	0.000	>.10
2	3.56	2.38	.683	8.4	1.723	.10
3	2.44	2.00	.571	9.1	0.778	>.10
4	2.94	3.13	.537	14.1	-0.336	>.10
5	1.22	0.50	.464	19.9	1.556	.10
6	2.56	2.63	.525	15.4	-0.132	>.10
7	2.44	2.50	.563	10.9	0.099	>.10
8	1.61	1.00	.450	13.1	1.358	.10
9	1.50	1.75	.674	11.4	-0.371	>.10
10	0.78	1.50	.802	10.0	-0.900	>.10

Note. Business executive sample size = 18. School executive sample size = 8. t (.10, 8 df = 1.397).
 t (.05, 8 df = 1.860).

Summary

Findings have been presented supporting the purpose of this study which was to examine the differences between school and business executives when making strategic decisions through a comparison of task variable analysis skills. The hypothesis for the study was: After reading a case study describing a strategic decision-making situation, business executives will have more correct responses than school executives on an investigator-written evaluation instrument designed to measure task variable analysis skills.

The hypothesis was rejected based on statistical analysis of the data. There was no statistically significant difference between the mean total number of correct responses of the business executive sample and the school executive sample. Differences were noted and discussed for individual item responses on the Case Study Survey. In addition, three demographic characteristics of the business and school executives were used to further analyze the data. Although the mean total number of correct responses of the business and school executive samples were not statistically different, differences were found and discussed for the individual item responses.

In Chapter V a discussion of the conclusions drawn from the analysis of the data is presented. Recommendations are also made for improving task variable analysis skills of business and school executives.

CHAPTER V

CONCLUSION AND RECOMMENDATIONS

The purpose of this study has been to examine the differences between school and business executives when making strategic decisions through a comparison of task variable analysis. The nature and scope of the differences were used to make recommendations for improving the training of school administrators.

Hypothesis

One hypothesis was formulated for this study based on a review of selected decision-making literature. The hypothesis was: After reading a case study describing a strategic decision-making situation, business executives will have more correct responses than school executives on an investigator-written evaluation instrument designed to measure task variable analysis skills.

Conclusion

The difference between the task variable analysis skills of school executive and business executive subjects was not significant at the .10 level for the study's hypothesis. The hypothesis was rejected. Business executives in the study analyzed the strategic decision-making process the same as did school executives.

There were statistically significant differences in the analysis skills for some individual task variables. The business executives were significantly better at identifying the functionary and accuracy, source, and currency of information task variables than were the school executives. The school executives did significantly better than business executives when analyzing the focus of accountability and frequency of use task variables.

A further examination of the executives' number of years of experience, number of employees in the organization, and the setting of the organization also indicated that the differences in analysis skills between the school and business executives were not statistically significant; however, some significant differences in analysis skills were measured for specific task variables. School and business executives with less than 10 years of experience had a significantly greater number of correct responses than did the school executives for the source of information, functionary, and frequency of use task variables.

Business executives with more than 10 years of experience had a significantly greater number of correct responses for the source and currency of information, and functionary task variables. School executives had significantly more correct responses than business executives for the focus of accountability task variable in each of the subgroups.

School and business executives from organizations with 100 or fewer employees showed similar differences in task variable analysis skills as executives with 10 or more years of experience. The greatest number of differences in task variable analysis skills was noted between school and business executives in organizations with more than 100

employees. Business executives had significantly more correct responses than school executives on 5 of the 10 task variables.

Executives in different organizational settings again showed statistically significant differences in analysis skills only for specific task variables. School executives from rural districts scored higher on the focus of accountability task variable and business executives in rural settings scored higher on the source of information task variable. Business executives from urban settings did significantly better than school executives from urban districts on the functionary, accuracy of information, and time horizon variables. Both the differences and similarities in analysis skills of the two groups were useful outcomes of the study and were used in formulating the recommendations.

Recommendations

This study reported findings that lead to the following recommendations:

1. The relatively low correct response mean on the survey indicates that in-service training is necessary for both school and business executives in order to improve task variable analysis skills.
2. Since differences in the task variable analysis skills of school and business executives were not significant, the value of using business executives as trainers or presenters for school executives is questionable.
3. The use of private sector management models should receive additional study before their adoption by school executives.

4. Educational reform literature and more specifically site-based and shared decision-making training should clarify the roles of staff, administration, and school boards in the strategic decision-making process.

Summary

Decision making is a central process in both school and business organizations. Strategic decision making is a critical process in determining an organization's ability to accomplish its short- and long-range goals and objectives. The various educational reform and restructuring movements rely heavily on school executives who are trained in operational, tactical, and most importantly, strategic decision-making processes.

Training is needed in order to provide the necessary task variable analysis skills for both business and school executives. It would be a mistake to assume that business executives are better able to analyze the task variables related to strategic decisions more effectively than school executives. This study has shown that both groups would benefit from additional training in these critical analysis skills.

APPENDICES

Appendix A
Case Study: Greenville Society for the
Performing Arts

CASE STUDY

Greenville Society for the Performing Arts

Introduction

The Greenville Society for the Performing Arts is a community-based, nonprofit organization founded in 1980. The Society is administered by the executive director, Roger Edwards, and managed by a nine member board of directors. The Board meets bimonthly to review budget and fund raising concerns. An executive committee consisting of the Board officers and the executive director meets semimonthly.

The Board officers are George Thomas, president, Mary Leonard, vice-president, James Lewis, secretary, and Susan White, treasurer. The officers' backgrounds include experience in both the school and business sectors. All have an interest in promoting and encouraging the performing and visual arts in the community.

Greenville is a midwestern, rural community with a population of 50,000. Two major population centers are located within a radius of 50 miles.

The Greenville Society for the Performing Arts has received broad-based support from the community and

surrounding region. The Society is funded through season ticket subscriptions to major events and productions, daily admittance fees to exhibits, and earnings from an endowment fund.

Society events are held in the Greenville Civic Center for the Performing Arts which was constructed in 1985 using both school and business donations. The Civic Center houses an art gallery and an auditorium. Local, regional, and nationally recognized artists are invited to display their works in the art gallery and the community symphony orchestra practices and performs in the auditorium. In addition, a variety of other performances are staged in the auditorium.

Executive Committee Meeting

As executive director, it was Edwards responsibility to prepare the agenda for the executive committee meeting. After reviewing the minutes from the previous executive committee meeting and recent discussions at staff meetings, Edwards realized that the executive committee needed to focus attention on two issues: raising additional funding and expanding programming. Edwards placed both of these issues on the agenda of the executive committee meeting after consulting with Society president, George Thomas.

George Thomas, as president, chaired the meeting. In his opening remarks he stated that the Greenville Society for the Performing Arts was facing important short range and long range concerns including both the endowment fund and the programming issues. He then asked Edwards to provide background information on the funding issue. Edwards stated that the interest and dividends on the investment of the endowment fund provided the major share of the annual operating revenue for the Civic Center. Increasing the endowment fund would generate more revenue and decrease the dependence on season ticket sales and admittance fees.

Turning to the issue of expanding programming, Thomas stated that many requests had been received urging the expansion of the programming schedule to include increased performances by the community symphony orchestra, stage productions, and a greater variety of exhibits from regional and national artists. Edwards agreed that expanded programming was desirable and reminded the members of the executive committee that expanding the number of events and activities would require more revenue.

Leonard again reminded committee members of the importance of the endowment fund and programming issues

to the continued success of the Society and he further stressed the need for approaching the issues with appropriate decision-making processes.

Lewis added that such issues required the attention of both the executive committee and the executive director. At this point Thomas invited the committee members to ask questions and provide ideas concerning the best choices for action in addressing both the endowment fund campaign issue and the expanded programming issue.

Appendix B
Case Study Survey

Case Study Survey

Part I: Demographic Information

Complete the following statements and questions about your organization.

1. Position _____
2. Number of years in present position _____
3. Number of years with present organization _____
4. Type of Organization _____.
 - A. School
 - B. Business Manufacturing Industry
 - C. Business Service Industry
5. Number of Employees _____.
 - A. Less than 50
 - B. 51 - 100
 - C. 101 - 200
 - D. Over 200
6. Location of organization _____.
 - A. Southwestern Wisconsin
 - B. Southeastern Wisconsin
 - C. Northeastern Wisconsin
 - D. Northwestern Wisconsin
7. Setting of organization _____.
 - A. Rural
 - B. Small city
 - C. Urban

Part II: Case Study Survey

Read the Case Study. Assume that you are Roger Edwards, the executive director of the Greenville Society for the Performing Arts. The Executive Committee has directed you to conduct the endowment fund campaign and to study expanding the programming options at the Civic Center.

Below are ten paragraphs which continue the dialogue of the executive committee meeting described in the case study followed by four alternate courses of action.

Rank the alternate courses of action in order of preference based on your personal background and decision making experience. Use the following scale:

- 1 - first choice
- 2 - second choice
- 3 - third choice
- 4 - fourth choice

This is not a test! There are no right or wrong responses.

1. The executive committee members discussed which groups of people or committees the executive director should meet with in order to generate ideas for promoting the endowment fund campaign. Realizing that time was important and that all groups could not be included in the process, the committee directed the executive director to review the list of groups.

As executive director rank the following four groups in order of importance to promoting the endowment fund campaign.

- _____ A. Civic Center employees.
- _____ B. Civic Center supervisors.
- _____ C. Community business leaders.
- _____ D. Executive directors of art centers from other communities.

2. The executive committee next considered which type of committee would be most effective in developing

the endowment fund raising campaign strategy. Once again discussion resulted in a list of four possible groups to assist in developing the strategy

As the executive director indicate your preferred choice of a group to develop the endowment fund raising campaign strategy.

- ☐ A. A committee composed of twelve civic center employees.
- ☐ B. A committee of ten employees and two supervisors.
- ☐ C. A committee composed of the executive director and the four civic center supervisors.
- ☐ D. The executive committee and the executive director.

3. Susan White, treasurer, stated that developing a successful strategy for the endowment fund campaign depended on collecting the necessary information about potential contributors. A number of types of information were suggested.

As the executive director indicate your preferred choice of information concerning potential contributors to the endowment campaign.

- ☐ A. Information on the financial background of season ticket holders.
- ☐ B. Demographic information about the people in Greenville and the surrounding area.
- ☐ C. Demographic information about the community as well as background information concerning the companies in the city and the surrounding area.
- ☐ D. Demographic information about the people and industries in Greenville and the surrounding area as well as projections for economic growth for the region.

4. Leonard expressed concern about the focus of the endowment fund campaign. She stated that in her opinion in order to successfully target potential contributors, the endowment fund campaign should

use one important variable such as net income. Lewis on the other hand suggested a wider focus concentrating on multiple factors which might be important in identifying potential contributors.

As the executive director indicate your preference concerning the number of variables which would be helpful in identifying potential contributors to the endowment fund.

- _____ A. Concentrate on one key variable when identifying potential contributors.
- _____ B. Use no more than two variables in the study to avoid confusion.
- _____ C. Consider multiple factors in the identification process of potential contributors.
- _____ D. Expand the study of potential contributors to include as many variables as possible.

5. Before moving to the second issue Thomas asked if any committee member had any additional suggestions for the executive director concerning the endowment fund campaign. White commented that Edwards should caution those working on the endowment campaign to be concerned about the accuracy of the information used in the process considering that this was a strategic decision process.

As the executive director indicate your preference concerning the accuracy of information which would be useful in making a strategic decision.

- _____ A. Consider only highly accurate, detailed information.
- _____ B. Use accurate, detailed information relying on estimates only as secondary sources of information.
- _____ C. Place less emphasis on the use of accurate information and a greater reliance on estimates and approximations.
- _____ D. Use information derived from estimates and approximations and consider detailed and accurate information only when approximations are not available.

6. The issue of expanding programming at the Civic Center was next considered by the executive committee. Thomas questioned the type of information which would be most beneficial to the study. A number of types of information were listed.

As the executive director indicate your preferred choice of information which would be most beneficial to determine how best to expand program offerings.

- _____ A. The number of advanced tickets sold for each event.
- _____ B. Daily attendance data from each exhibit or event.
- _____ C. A summary of preferences collected from a survey mailed to a sample of season ticket holders.
- _____ D. The responses from a random sample of residents of Greenville and the surrounding area collected during a telephone survey.

7. Edwards explained to the executive board that a successful strategy for examining the programming schedule would include collecting information from a variety of sources. Executive committee members gave examples of information sources Edwards should consider.

As the executive director indicate your preferred choice of information sources.

- _____ A. Daily attendance at each of the exhibit areas at the Civic Center.
- _____ B. The responses of patrons who complete a five question survey when they attend a Civic Center event.
- _____ C. The responses from a random survey of community members who have attended at least one civic center event during the past year.
- _____ D. The responses of the season ticket subscribers on the last two annual surveys.

8. Mary Leonard, Vice-President, asked if the committee had considered the span of time which would be required to conduct the endowment fund campaign. Edwards responded that given the importance of selecting the proper exhibits and performances to enhance the programming, the length of the study was critical.

As the executive director indicate your preferred choice of a time span for the study.

- _____ A. Fund raising activities should conclude in approximately one month.
- _____ B. Board members should expect a series of meetings which would be completed in approximately three months.
- _____ C. Meetings and activities would require a year in order to be successful.
- _____ D. A long term commitment of at least two years would be necessary to successfully complete the study to expand program offerings.

9. Lewis questioned how the executive committee would evaluate the expansion of program offerings. White stated that the indicators should be observable and measurable. All members agreed on the importance of evaluating their actions.

As the executive director indicate your preferred measure of accountability for the expansion of program offerings.

- _____ A. Number of new program offerings.
- _____ B. Change in daily attendance at all Civic Center events.
- _____ C. Responses of season ticket holders to an opinion survey concerning the changes in program offerings.
- _____ D. Responses of a random sample of residents in the Civic Center service area to an opinion survey concerning the changes in program offerings.

10. After all other discussions about both the endowment fund campaign and the expansion of program offerings, members of the executive committee speculated about the frequency of future meetings on these issues. One of the members asked the executive director how often these issues would be addressed in the future.

As the executive director indicate your expectations of the frequency that these issues should be discussed in the future.

- ☐ A. Discussed at each meeting of the Board of Directors.
- ☐ B. Discussed at alternate meetings of the Board of Directors.
- ☐ C. Reviewed on a semiannual basis at Board meetings.
- ☐ D. Reviewed on an annual basis by the Board of Directors.

Appendix C
Author Validation Panel

Author Validation Panel Members

Dr. M. D. Cohen
5601 Haven Hall
Department of Political Science
University of Michigan - Main Campus
Ann Arbor, MI 48109-1045

Dr. R. M. Cyert
Carnegie-Mellon University
5000 Faber
Pittsburgh, PA 15213

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Department of Political Science
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Dr. Henry Mintzberg
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Dr. Robert Owens
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Hofstra University
Hempstead, NY 11550

Dr. R. Schmuck
Associate Dean
Division of Educational Policy and Management
College of Education
Eugene, OR 97403

Dr. C. R. Schwenk
Department of Business
Indiana University Purdue University
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Dr. L. T. Pinfield
Department of Business Administration
Simon Fraser University
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Dr. W. R. Roth, Jr.
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Bethlehem, PA 18018

Dr. M. K. Starr
Columbia University
Graduate School of Business
311 Uris Hall
New York, NY 10027

Dr. Gary Yukl
Department of Management
SUNY at Albany
Albany, NY 12222

Dr. Milan Zeleny
Department of Business Administration
Fordham University
Lincoln Center
New York, NY 10023

March 15, 1992

Dr. Robert Schmuck
Associate Dean
Division of Educational Policy and Management
College of Education
Eugene, OR 97403

Dear Dr. Schmuck:

I am a doctoral student in Western Michigan University's Educational Leadership program and the superintendent of the School District of Bonduel. I would like to invite you to participate in the validation of a case study and survey which will be used to compare the task variable analysis skills of school and business executives.

Five authors cited in the literature review of the study are being invited to assist in the validation of the case study and survey. Enclosed are the case study, an evaluation form, and the case study survey. Both the case study and survey are relatively brief and should not require more than twenty minutes to read. After reading the material, please take a few moments to provide your comments on the attached evaluation form.

Please also complete the case study survey. Your responses will provide validation information for the survey.

Please return your evaluation form and the completed case study survey in the self-addressed, stamped envelope. Thank you in advance for your time and interest in the study.

Sincerely,

Peter Behnke

P.S. The dollar is for a cup of coffee or a can of soda while you read the case study. Again thank you for your assistance.

Case Study Evaluation Form

Name _____

After reading the case study please provide your responses to the following questions.

1. Does the case study realistically simulate a decision-making situation?

2. Does the decision-making situation in the case study represent a strategic decision?

3. Does the case study provide an adequate amount of information to enable a reader to complete the case study survey?

After completing this evaluation form, please complete the case study survey.

Appendix D
Transmittal Letters

School District of Bonduel

400 West Green Bay Street
BONDUEL, WISCONSIN 54107
(715) 758-2148

December 15, 1992

LaVerne H. Mueller, President
Mueller Property Services, Ltd.
131 West Wilson Street
Madison, WI 53703

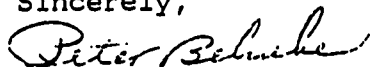
Dear Mr. Mueller:

A few days ago you received a case study and survey concerning my study comparing the decision-making strategies used by business and school executives. If you have already returned your survey, please accept my thanks and discard this copy. If you misplaced or have been unable to find the time to complete your previous copy, I would ask that you take a few minutes to read the case study and respond to the survey. Your answers are important in order to maintain the statistical integrity of the stratified random sample. Since the sample consists of only thirty private executives, each response is critical.

Please return the completed survey in the self-addressed, stamped envelop. Indicate on the enclosed postcard, if you would like a summary of the survey results. The postcard will enable me to determine who has completed the survey while insuring that responses remain confidential. Because of the need for a high response rate, I will call those executives who do not return the follow-up survey.

I appreciate your interest and participation in my study. If you have any questions, my business telephone number is (715) 758 - 2148.

Sincerely,



Peter Behnke
District Administrator

"An Equal Opportunity Employer"

School District of Bonduel

400 West Green Bay Street
BONDUEL, WISCONSIN 54107
(715) 758-2148

December 16, 1992

Dennis Kirkman, Dist. Adm.
Lake Holcombe School District
P.O. Box 40
Holcombe, WI 54745

Dear Mr. Kirkman:

I am beginning the research phase of my doctoral program. The focus of my study is decision-making. More specifically, the study will compare the decision-making strategies used by business and school executives. Decision-making is a critical leadership skill. This study will provide additional insights into the decision-making process. Attached is a letter of support from Miles Turner, WASDA Executive Director.

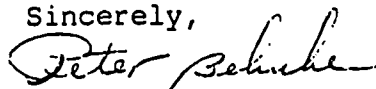
Your name was one of thirty Wisconsin district administrators selected at random to participate in the study. Thirty business executives will also be participating. Enclosed is a short case study concerning the fictitious Greenville Center for the Performing Arts along with a related survey. After reading the case study, please complete the survey.

I realize that your time is valuable. Consequently, I have designed the case study and survey to be as brief as possible. Pilot studies have shown that reading the case study and completing the survey should not require more than 20 minutes.

Please return the completed survey in the self-addressed, stamped envelop. Indicate on the enclosed postcard, if you would like a summary of the survey results. The postcard will enable me to determine who has completed the survey while insuring that responses remain confidential.

I appreciate your interest and participation in my study. Please use the dollar to have a cup of coffee or a soda while completing the survey. If you have any questions, my business telephone number is (715) 758 - 2148.

Sincerely,



Peter Behnke
District Administrator

"An Equal Opportunity Employer"



**Wisconsin Manufacturers
Association — 1911
Wisconsin Council
of Safety — 1923
Wisconsin State Chamber
of Commerce — 1929**

James S. Haney
President

James A. Buchen
Vice President
Government Relations

James R. Morgan
Vice President
Education and Programs

Susan B. Schneider
Vice President
Administration

December 2, 1992

Dear Wisconsin Business Executive,

Attached to this letter is a case study and survey which are the focus of Peter Behnke's dissertation project. Mr. Behnke is doing a comparison of the decision-making strategies of private sector executives and school executives. The case study and survey will provide the data necessary for correlating the responses of the two groups.

Wisconsin Manufacturers & Commerce is interested in the results of Mr. Behnke's dissertation and we hope you will take the time to complete the survey.

Thank you for your participation in this worthwhile project.

Sincerely,

James R. Morgan
Vice President, Education and Programs

501 East Washington Avenue
P.O. Box 352
Madison, WI 53701-0352
Phone: (608) 258-3400
FAX: (608) 258-3413



WISCONSIN ASSOCIATION OF SCHOOL DISTRICT ADMINISTRATORS, INC.

1 South Puckney Street, Madison, WI 53703

Miles Turner, Executive Director

608-255-1533
608-255-6700 FAX

EXECUTIVE OFFICERS

Terms expire 6/30/93

RICHARD SWANTZ

President

La Crosse Public Schools
807 East Avenue South
La Crosse, WI 54601

JOHN NEGLEY

President-elect

Whitewater Public Schools
401 South Elizabeth Street
Whitewater, WI 53190

DENNIS RICHARDS

Past President

Black River Falls Public Schools
301 North Fourth Street
Black River Falls, WI 54615

BOARD OF DIRECTORS

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Robert Beaver, CESA #5
Al Osterdorf, CESA #6
Gerald Makie, CESA #9
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Terms expire 6/30/94

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Jeanette Kirkpatrick, CESA #3
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Terms expire 6/30/95

Dennis Richards, CESA #4
John Egan, CESA #7
Cornelius VanderZeyden, CESA #8
Terry Olson, CESA #10
Richard Swantz, Lg. Schools

October 15, 1992

Dear WASDA Member:

This is a letter of support for Peter Behnke's dissertation project. The focus of the project is a comparison of the decision-making strategies for private executives and school executives. The enclosed case study and survey will provide the data necessary for correlating the responses of the two groups of executives.

The Wisconsin Association of School District Administrators supports dissertation projects of this type by school administrators. The project will result in a better understanding of the critically important decision-making process.

Please read the case study and complete the survey. Your participation is greatly appreciated.

Sincerely,

Miles Turner
Executive Director

MET:nl

Member of Wisconsin Council of School Administrative Associations

Appendix E

Calculations

**Case Study Responses for Business
Executive and School Executive Samples**

$$H_0: u_1 = u_2$$

$$H_a: u_1 > u_2$$

t-Test

$$\underline{t} = \frac{(x_1 - x_2) - (u_2 - u_1)}{s_{x_1-x_2}}$$

Cochran-Cox Formula

$$s_{x_1-x_2} = s_1^2/n_1 + s_2^2/n_2$$

Satterthwaite Formula

$$\underline{df} = (s_1^2/n_1 + s_2^2/n_2)^2 / [(s_1^2/(n_1-1) + (s_2^2/n_2)^2/(n_2-1))]$$

u_1 = Business executive population correct response mean.

u_2 = School executive population correct response mean.

x_1 = Business executive sample correct response mean.

x_2 = School executive sample correct response mean

$s_{x_1-x_2}$ = Standard error of the difference.

n_1 = Business executive sample size.

n_2 = School executive sample size.

s_1^2 = Business executive sample variance.

s_2^2 = School executive sample variance.

df = Degrees of freedom.

$$s_{x1-x2}^2 = 4014.98/21 + 3368.79/28$$

$$s_{x1-x2}^2 = 17.65$$

$$\underline{t} = \frac{(21.67 - 19.96) - (0)}{17.65}$$

$$\underline{t} = .096$$

$$\underline{df} = \frac{(191.19 + 120.31)^2}{\frac{(191.19)^2}{(21 - 1)} + \frac{(120.31)^2}{(28 - 1)}}$$

$$\underline{df} = 41.05$$

Appendix F
Approval Letter From the Human Subjects
Institutional Review Board

Human Subjects Institutional Review Board



Kalamazoo, Michigan 49008-3899

WESTERN MICHIGAN UNIVERSITY

Date: November 11, 1992

To: Peter Behnke

From: M. Michele Burnette, Chair *M. Michele Burnette JKB*

Re: HSIRB Project Number: 91-09-08

This letter will serve as confirmation that your research protocol, "A study of public and private administrator analysis of strategic decision task variables" has been reapproved by the HSIRB. The conditions and duration of this reapproval are specified in the Policies of Western Michigan University. You must seek reapproval for any change in this design.

The Board wishes you success in the continuation of your research goals.

Approval Termination: November 11, 1993

xc: Brinkerhoff, Educational Leadership

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