RESTRUCTURING IN STATE DEPARTMENTS OF EDUCATION: AN ANALYSIS OF STRUCTURAL EVOLUTION

DISSERTATION

Submitted to the College of Human Resources and Education

of

West Virginia University

In Partial Fulfillment of the Requirements for

The Degree of Doctor of Education

by

Harriet Maxey Deel

Morgantown and Institute

West Virginia

1992

ACKNOWLEDGMENTS

This dissertation reflects efforts and consideration of many persons to whom I express appreciation. Professional colleagues, family and friends contributed in numerous ways, without which this study would not have been possible.

Dr. Jack Yeager, as chair of my committee, and Dr. Richard Meckley deserve much credit for this study. I am grateful for guidance through definition of study topic and sequence of approach. Continual gentle reminders of the next task to be completed proved to be especially helpful. Dr. JoAnn Hall, Dr. Joyce Waugh and Dr. Ken Young deserve appreciation for their useful critiques along the way. As members of my committee, they have provided considerable thoughtful assistance. Also, my thanks are extended to Dr. Paul Leary and Dr. James Ranson for their valuable assistance in guiding my research.

I am indebted to many people at the West Virginia Department of Education. I am grateful for the valuable opportunity provided to me by Dr. Henry Marockie in assigning me an active role in the restructuring of the West Virginia Department of Education. My wonderful associates in the Office of Child Nutrition deserve special thanks for their help, understanding and support.

My deepest gratitude is expressed to my family. My husband, Bill Deel, displayed exceptional patience and provided amazing encouragement, without which I could not have completed the challenge. The suggestions given and the confidence expressed by Brad Deel, Conrad Deel and Lois Rosenow helped me to persevere in this endeavor.

To my remarkable mother, Elizabeth Young Maxey, now deceased, I dedicate this doctoral dissertation. As a competent and visionary professional educator and my most positive role model, she expressed throughout my life, and particularly in the early stages of the doctoral program, her unwavering confidence in my ability to complete any worthy challenge.

TABLE OF CONTENTS

PAGE

LIST OF TABLES AND FIGURES viii

CHAPTER

I. INTRODUCTION 1

Background 2

Events Leading to Investigation 11

Statement of the Problem 13

Study Objectives 14

Definitions 15

Significance of the Study 17

Assumptions 19

Limitations of the Study 20

Study Plan and Format 21

II. REVIEW OF THE LITERATURE 23

Reform Movement Demands State Level Restructuring 24

Mission and Goals: Organization Vision and Direction 29

Organization Configuration: Reducing the Hierarchy 32

Avenues for Flexibility in Roles and Functions 35

Decentralized Decision-Making Structures . . . 39

Training Delivery Models 42

Establishment of Structural Linkages 44

PAGE

Summary 47

III. RESEARCH PROCEDURES 49

Introduction 49

Population 51

Sampling Procedure 51

Methodology 54

Data Collection 55

Data Processing 58

IV. RESULTS OF THE STUDY 60

Introduction 60

Participation in the Study 61

Statistical Procedures 62

Restatement of Mission and Goals 63

Organizational Hierarchy 69

Flexible Roles and Functions 72

Decentralized Decision Making 75

Delivery Models for Training 79

Linkages to Other Agencies 84

Ancillary Findings 92

Influence of Mission and Goals on Structure 92

Relationship of Economic Base and Hierarchical Layers 93

Reductions in Hierarchical Layers 95

PAGE

Restructuring in Process 95

Impediments to Restructuring 96

Summary of Findings 96

V. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS . . . 100

Summary of Purpose and Research Design . . . 100

Conclusions 101

Implications 110

Recommendations for Further Research 111

BIBLIOGRAPHY 115

APPENDIX A: Council of Chief State School Officers 125

APPENDIX B: Gross State Product 133

APPENDIX C: Cover Letter, Pretest 135

APPENDIX D: Cover Letter, Instrument 137

APPENDIX E: The Instrument 139

APPENDIX F: List of States Pretesting Questionnaire 146

APPENDIX G: Comment Form, Instrument 148

ABSTRACT 150

SIGNATURE PAGE 152

LIST OF TABLES AND FIGURES

TABLE PAGE

1. Primary Determinant for Mission Restatement . . 66
2. Primary Determinant for Goals Restatement . . . 66
3. Primary Determinant for Mission Restatement, Recategorized 67
4. Primary Determinant for Goals Restatement, Recategorized 67
5. Adoption of National Education Goals at the State Level 68
6. Structural Avenues Legitimating Flexible Roles 73
7. Use of Deregulation Vehicles 77
8. School Based Decision-Making Structures 79
9. Training Delivery Models 81
10. Training Delivery Models, Relative Usefulness 83
11. Linkages with Universities and Colleges . . . 86
12. Linkages with State Governmental Agencies . . . 87
13. Linkages with Private Business 89
14. Linkages with Professional Organizations . . . 90

FIGURES

1. Sample Selection 53
2. Frequency of Numbers of Hierarchical Layers in State Departments of Education 70

CHAPTER ONE

INTRODUCTION

Decisive action by the state of New Jersey in intervening in the local administration of Jersey City school system, removing the district superintendent and local board members and replacing them with a state appointed superintendent demonstrated a bold response to needed educational reforms. This signal event sent a clear message that extraordinary circumstances may require extensive local school improvement and radical, adaptive changes at the state level. Indeed, state takeover of local school districts had been envisioned by the National Governors' Association in 1986, by state legislators and the New Jersey Commissioner of Education as a viable alternative to a school district's "severe and complex deficiencies" (NJSA, C. 18A:7A-15.1, 1987; NJSA, C 18A: 7a-15.1d, 1987; Tyack, 1990; WVSA, C. 18-2E-5, 1991). Direct state intervention in districts or schools where severe academic or fiscal deficiencies exist may be viewed as a current manifestation of a reform movement which began earlier in the 1980's.

It was the thesis of this study that in order to deal with the severe problems attendant to education reform state departments of education will, of necessity, undergo internal structural changes. The research reported herein

is an investigation of the nature of these restructuring changes which have occurred within the past five years.

Background

Writing in Educational Administration Quarterly, Kirst (1988) stated, "The year 1983 is generally regarded as the beginning of the current cycle of state education reform" (p. 319). With the release of the report by The National Commission on Excellence in Education (1983), A Nation At Risk: The Imperative For Educational Reform, attention was focused on such issues as improving student academic performance, strengthening graduation requirements and increasing formal education requirements for teachers.

Findings in A Nation At Risk helped launch the goals and strategy for the national reform agenda for the final decade of this century. The administrative arm of government articulated concerns through development of educational goals: school readiness, 90 percent graduation rate, competency in the academic core subjects, supremacy in mathematics and science, adult literacy, and positive learning environment (Alexander, 1991). The goals and strategy to reach the goals, however, extend beyond the walls of schools into quality of life issues and issues of economic global competitiveness.

Much of the recent education reform movement has been rooted in issues of economic competitiveness and success of

business and industry. This was the contention of Kirst (1988) when he wrote:

> There is a presumed linkage between international and interstate economic competition and education. An educated work force is considered crucial to higher productivity and adaptability to rapidly changing markets (p. 319).

Regarding loss in productivity as it relates to the failure of schools, Smith and Lincoln (1988) indicated that "the 973,000 dropouts from the nation's high schools in 1961 will lose $228 billion in personal earnings over a lifetime while society will lose $68.4 billion in taxes" (p. 5). A more severe analysis was described by Hamby (1989) who indicated that the results of the 1985-86 societal losses are projected at " $120 billion" (p. 21).

Within the corporate world, issues of industrial production, worker training and problems of business executives have been related to education. According to Beer, Eisenstat and Spector (1990), business has spent large sums to improve competencies of workers and to mobilize commitment to organizational goals. Some major corporations such as Security Pacific National Bank have developed partnerships with schools in order "to ensure a future work force while reducing costs of inservice education and training for employees" (Merenda, 1989, p.7).

The challenge to public education and the urgency of educational reform were well captured by Branson (1990):

> The immense educational challenge of the future requires a new paradigm. The era has changed. The knowledge-base has increased vastly, the requirements for intellectual activities are increasing, and the performance of the traditional paradigm has declined (p. 8).

According to Darling-Hammond (1990), reformers have contended that presently designed public education is incapable of solving the problems which will be encountered in the 21st century. Shrinking resources and interdependence intensify the need for joint educational decision making. Alternatives, opinions and ideas generated through participative decision making improve the outcomes (Lewis, 1986). Applying the well-known Quality Circles problem-solving model to education, Lewis further hinted that solving even small educational problems has positive, far reaching effects.

Focusing efforts on problem-solving structures and strategies is essential in order to meet the challenge of providing an adequate level of educational success for all (Action Council on Minority Education, 1990; Comer, 1988; Center for Research on Elementary and Middle Schools, 1989; Slavin & Madden, 1989; Smith & Lincoln, 1988). Such

problem-solving structures and strategies include building a shared vision, establishing networks, and granting decision-making authority to persons closest to the student (David, 1989; Mojkowski & Fleming, 1988; Sirotnik & Clark, 1988; Smith & Purkey, 1985). They also include redefining roles and functions, facilitating professional development and renewal (Gardner, 1990; Goodlad, 1990; Toth & Young, 1987) and developing collaborative linkages (U.S. Department of Education, 1991).

The literature has suggested that organizational mission and goals provide a focus or catalyst for organizational structural changes vital to educational reform. For example, in a study of the Virginia Department of Education conducted by Price Waterhouse (1989), the Department was advised to adopt structures and approaches that directly tie to priorities. The state of Texas was advised by that same study group to develop an "organizational structure which incorporates modern management principles for high performance service organizations such as ...matrix approaches to selected mission areas" (Price Waterhouse, 1990, p. IV-70). The concept of mission as the focus for organizational structure was likewise captured by the American Management Association (1991) when the Association identified an essential quality issue to include "a vision

or mission statement that captures the essence of exactly how the organization serves customers" (p. 5).

In regard to organizational mission, Tichy and Devanna (1986) stated: "Leaders must choose their goals from among the feasible set of alternatives the organization could pursue and design the organization to carry out the chosen strategy" (p. 97). They further asserted that the organization and strategy for achieving it are the most important technical tasks of a leader. Sergiovanni and Moore (1989) viewed leadership as building and bonding, elevating goals and purposes to the level of shared covenant. Shared vision is antecedent to second order changes such as process changes (Sergiovanni & Moore, 1989). Giving direction and purpose to an organization, the mission and goals form a framework for commitments and allocation of resources.

Structural elements serve as vehicles for achieving the organizational mission and goals. Regarding organizational configuration, the pyramid arrangement of the hierarchical bureaucracy may no longer be a viable form as the information age replaces the industrial age. (Bennis, 1966; Gardner, 1964; Gardner, 1990). Lateral, in contrast to vertical, sharing improves productivity and facilitates information exchange (Hanson, 1985; Naisbitt, 1982). Included among the strategies for achieving

excellence, Lewis (1986) listed reducing organizational levels.

Empowerment for educational problem solving and effective decision making often requires changing, adaptive roles of professionals. The United States Department of Education (1991) indicated that administrators who catalyze and sustain restructuring environments must be willing to set aside control for enablement. Knowles (1983) stated that innovative organizations, in contrast to static ones, are characterized by fluid, broadly defined roles and by multiple links based on functional collaboration.

Successful business and industry managers are also redesigning the organization to accommodate fluid, adaptive roles. According to Beer, Eisenstat & Spector (1990) and Dumaine (1991), an essential element of adaptive organizations includes structural features such as cross-functional teams or employee initiated teams. Such structural features facilitate joint diagnosis of problems.

In setting forth additional related restructuring trends, Naisbitt (1982) emphasized the move from centralized to decentralized organization decision making. The educational reform movement, which has shifted from demanding higher standards to redesigning governance structures, focuses on decentralizing and professionalizing educational decision making (Swanson, 1989). Since change

does not result from externally imposed procedures (Fullen, 1982), site-based management is regarded by many education reformers as the structure best suited to effective educational decision making (David, 1989; Majowski, 1988; Reecer, 1989; Sirotnik & Clark, 1988). Emerging organizational patterns should be of particular interest to educational administrators in view of the prevalence and tenacity of existing pyramidal structures. The hierarchical structure continues to survive in many educational agencies in spite of much rhetoric regarding democratic structures and shared authority.

David (1989) indicated that two policies define the essence of school-based management: (a) school autonomy through site budget control and relief from constraining rules and regulations and (b) shared authority to make decisions. She further clarified that a key element of site-based management is existence of a structure for local flexibility such as a process for seeking waivers from state regulations.

Facilitating professional development and renewal are critical elements for a constructive climate for mutual problem solving and decision making. "School renewal and improvement must be focused on both <u>personal</u> growth and <u>organizational</u> adaptation" (Toth & Young, 1987). Professional educators need many tools, including

technological, for educational problem solving. Gardner (1990) advocated developing many opportunities for mentoring relationships as avenues for growth and renewal.

Collaborative linkages create interdependencies and opportunities to discuss common problems and suggest alternative solutions (Association of Supervision and Curriculum Development, 1990). The role of connectedness and cooperation in an organization's evolutionary process has been well documented (Harman, 1987; Scott & Hart, 1979; U.S. Department of Education, 1991). Mojkowski and Fleming (1988) declared that leaders of restructuring will forge connections. They will dismantle egg-crate structures and connect within and across disciplines. Regarding problem solving, they stated, "the discovery of suitable ends and the application of appropriate means are often simultaneous puzzles the restructuring leader solves in collaboration with colleagues and community" (p. 27).

From a theoretical perspective, social systems theory relates significantly to concepts of organizational growth and change. Scott (1967) discussed how systems analysis of human organizations reveal five parts in the framework, two of which include structural elements. These elements were identified as (a) formal organization and (b) structure of status and role-expectancy systems. The formal organization provides structure for the organization's

economic and efficiency pursuits. Status and role arrangements are internally linked by hierarchical ordering and by informal prestige groups and occupations.

Within the framework of systems theory, structural evolution is crucial to organizational growth and health (Scott, 1967). Structural changes may involve formal organizational patterns including subsystem patterns or linkages, the regularized patterns of interaction (Hanson, 1985; Parsons, 1960; Scott, 1967).

In Recent State Education Reform in the United States: Looking Backward and Forward, Kirst (1988) asserted, "Reforms that last usually involve structural or organizational change ..."(p. 356). As with any human organization, a department of education with a structure which remains unchanged and stagnant might be expected to move toward rigidity, irrelevancy and decline. Of the necessity of adaptation, Scott (1967) stated emphatically that human organizations "must change or die" (p. 128). Conversely, as a human organization which is an open, adaptive system developing or modifying structure based on relevant feedback and constituent needs, a department could be expected to maintain equilibrium and sustain growth (Tichy & Devanna, 1986).

Innovative organizations, in contrast to static ones, characteristically achieve positive decision making by

problem solving (Knowles, 1983). Further, they are characterized by relevant constituent participation and collaborative policy making and policy implementation.

Events Leading to Investigation

As a result of extensive educational reforms, the State Superintendent of Schools in West Virginia set in motion a participative department restructuring process. The primary purpose of the restructuring effort was to ensure that functions and tasks were aligned or realigned to accomplish the state board's mission and goals and the goals established by state legislation (Marockie, 1991).

Restructuring initiatives in other state departments of education have also been impelled by an examination of purpose and goals. For example, the Arkansas Department of Education was legislatively mandated to assist local districts and schools to restructure education "in the context of the national education goals" (ASA, C. 6-11). The Delaware Department of Public Instruction has a redesigned framework for educational leadership, encompassing a new agency vision, changes in roles and relationships, and revisions in organizational structure (National Association of State Boards of Education, 1991). In New Mexico, a planning council examined issues of accountability, reconceptualizing mission and redefining

roles and relationships within the department of education (Pipho, 1990; Schmidt, 1990).

Many state departments of education are being restructured in response to an expressed intent to function more as a service agency and less as a regulatory agency. In Massachusetts, the department is moving away from a regulatory to a service agency (Pipho, 1990). The North Carolina Department of Public Instruction is likewise shifting emphasis from regulation to service as the organization focuses on providing intensive technical assistance to local school districts (Pipho, 1990). Texas is attempting to strengthen the state's technical assistance to school districts (Ziskie, 1991).

Complete overhaul of the department structure has been considered in some states. Ohio's business leaders have called for an overhaul of the state education department. The Ohio restructuring committee recommended refocusing from auditing and monitoring to support, research and service (Wolk, 1991). Oklahoma's state school board has approved a restructuring plan designed to overhaul that state education agency's bureaucracy (Wiseman, 1991). The Kentucky Education Reform Act of 1990 enacted sweeping governance changes including appointment of a state commissioner of education and abolition of all Kentucky state department of education jobs. In Virginia, an

executive decision to reorganize the department was contested in Circuit Court. However, the legality of a reorganization was upheld within the context that there will be no attempt to abolish the department or transfer functions to another agency (Walker, 1991).

The departments of education named above and others are reorganizing and attempting major changes in order to provide optimal leadership and service to local education agencies and schools in a complex, global information age. Price Waterhouse (1989) concluded that "there is no 'standard' organizational structure among state departments of education" (p. VI-39). Optimum or appropriate structures for state departments for implementing needed educational reforms have not been determined. The frame of reference for this inquiry is structural elements or vehicles which are emerging in state departments of education as the organizations attempt to establish infrastructures which support reforms.

Statement of the Problem

This study addressed the question, "What is the nature of structural changes evolving in state departments of education which are perceived by state superintendents as useful in implementing educational reforms?" Examination of structural changes were in the areas of (a) organization configuration, (b) avenues which legitimate flexible roles

and functions, (c) decentralized decision-making structures such as site-based management, (d) revisions in training delivery models, and (e) linkages established with other agencies.

Study Objectives

Stated objectives guided the study. They were as follows:

1. Ascertain the proportion of state departments of education in which educational mission and goals have been restated in response to the current reform movement, and identify the primary determinants of such restatements.

2. Determine the extent to which departments of education have reduced vertical layers in the organizational hierarchy, and the perceived optimal number of layers for efficient decision making.

3. Ascertain whether departments of education have adopted flexible, cooperative roles and functions for professional specialists in response to restatement of mission and goals and, if so, identify structural avenues which legitimate flexible roles and functions.

4. Determine how state departments of education facilitate decentralized decision making such as site-based management, and identify which structure(s) is (are) perceived by state superintendents as being useful in enabling local decision making.

5. Identify models for delivering training and technical assistance to local education agencies and schools which have been developed or modified in response to the current reform movement, and determine which delivery model(s) is (are) perceived by state superintendents as useful for educational problem solving.

6. Identify the types of outside agencies with which departments of education have established structural links, and determine primary benefits or services expected by state superintendents from such linkages.

Definitions

Restructuring has been variously defined, primarily relating either to a local school perspective or to a more global perspective. In "'Restructuring' in Historical Perspective: Tinkering toward Utopia, " Tyack (1990) stated:

> People regard restructuring as a synonym for the market mechanism of choice, or teacher professionalism and empowerment, or decentralization and school site management, or involving parents more in their children's education, or national standards in curriculum with tests to match, or deregulation, or new forms of accountability, or basic changes in curriculum and instruction, or some or all of these in combination (pp. 170-171).

The need for a clear definition of restructuring has been emphasized by Koerner (1991) and other writers and educators. The United States Department of Education, Office of Educational Research and Improvement (1991) viewed restructuring as reconfiguring basic functions, operations, and organization of educational agencies.

For the purposes of this study, the following definitions were applied:

Reconceptualized mission and goals - a restatement of the organization's purposes or direction in response to judicial action, legislative mandate or administrative decision.

Organizational hierarchy - numbers of vertical layers in line relationships in organization charts, beginning with and including professional specialists through the chief state school officer.

Flexible roles and functions for professional specialists - relationships and responsibilities of professional personnel which allow intradisciplinary or interdisciplinary teaming or problem-solving approaches.

Decentralized decision-making structures - deregulation vehicles such as exemption or waiver process, financial incentive systems, or other site-based management strategies which encourage school level decision making regarding educational improvements.

Delivery models for training and technical assistance - vehicles for professional development including, but not limited to seminars, conferences, academies, teleconferences, instructional software, internships and financial awards for mentoring.

Structural links to outside organizations - "boxes," connecting lines, stated functions or configurations on the organization chart which visibly tie or relate the department to outside agencies such as universities, regional agencies or other state agencies.

Significance of the Study

The specific significance of the study lies in the expected contribution of the findings to educational administration, particularly at the state level. For example, identification of states where educational purposes have been redefined in response to the reform movement might prove beneficial to administrators and policy makers who are seeking organizational transformation or embracing paradigm shifts. In the area of organization direction or mission, this study determined the extent to which mission and goals have been restated in state departments of education and the primary determinants of such restatements.

Since limited data are available to guide state level educational administrators in organizational structural

areas, this study built upon the scarcity of research in these crucial areas. This study focused on new structures, including organization configuration and linkages that are being formed in departments of education, and it provided insight into their perceived usefulness. The study sought to determine the current evolutionary movement in bureaucratic configurations and the impact of such evolution on the vertical shape of organization hierarchy in departments of education. Consistent with the concept of organizational adaptivity or fluidity, this study sought to determine if, and by what mechanisms, flexible roles are expected of professional employees in state departments of education. An anticipated outcome of this study was the identification of statewide mechanisms which have been established to facilitate school based management structures. An attempt was made to determine which of these mechanisms have been perceived by state superintendents as being useful in enabling school based problem solving and decision making.

Discovering emerging vehicles for professional development and avenues for building external networks can provide superintendents and educational administrators with options for consideration in creating an organic, adaptive form of organization. Experiences from other educators often provide useful guidance related to common challenges.

Additionally, identifying external linking elements and their perceived benefits should prove useful for state departments of education as the organizations' structures evolve to meet changing environmental demands indigenous to the educational reform movement.

This study yielded a data base regarding organizational modifications and adaptive structures for consideration by superintendents, other education administrators and policy makers. Additionally, the results of the study documented data for proposing future studies.

Assumptions

Fundamental assumptions of the study were as follows:

1. Redefinition of mission and goals reflects a reconceptualization of direction in an educational organization.

2. Flattening the educational organization hierarchy facilitates efficient decision making and action (change) by requiring fewer approval layers.

3. Restructuring an organization requires fundamental changes in roles and functions within that organization.

4. A logical link exists between a service delivery model and the service outcomes.

5. Problem-solving approaches which use expertise from various relevant viewpoints or disciplines facilitate finding solutions to complex human problems.

Limitations of the Study

The study population included administrators in selected state educational agencies. Respondents included a mix of state superintendents, assistant state superintendents, executive assistants and directors of units in state departments of education. Reported findings were limited to respondents whose position titles conformed to, or were equivalent to, these position levels.

Although regional education centers exist in many states, administrators in these centers were not included in the study. Regional education centers were only addressed as a category of structural links to state departments of education.

While informal organizational patterns often influence behaviors and outcomes, the scope of this study was limited to formal organizational structures. Additionally, the subject was in a state of flux, and new events and policies change the status of the evolutionary process. Consequently, responses were limited to the structural elements as they existed at the time of the inquiry, and to the knowledge base and perceptions of individual respondents.

While the data base is expected to be useful regarding structural modification options being considered by administrators and policy makers, direct transferability of

data from one state to another may not be appropriate due to differences in legislative mandates, financial structures, demographics or other circumstances.

A study-specific questionnaire was used to gather a significant portion of the data. The instrument was pre-tested but no comprehensive validation of the instrument was anticipated.

Study Plan and Format

A mix of historical and descriptive research methods was used to systematically and objectively locate, document and interpret evidence related to the question. By determining the status of structural components of state departments of education and making comparisons, the study attempted to describe structural changes which have been made in response to the educational reform movement in order to facilitate problem solving and decision making. It was anticipated that the data would indicate trends which would suggest structural evolution for the future. According to Scott (1967), "The present form of an organization is partially a result of anticipation of the future" (p. 139).

Examination of evidence included focus on content of relevant documents, artifacts and records. Such records and documents included, but were not limited to, state code, mission and goal statements, and organization charts.

In addition to evidence located in documents and records, a mail questionnaire was used to gather data from state educational administrators in a stratified sample of states. Results of the questionnaire provided data for identifying department structural modifications as educational administrators and policy makers seek to establish avenues for solving complex problems and for making decisions. Established structural categories were analyzed and synthesized based upon responses. The questionnaire also provided information regarding structural changes which state superintendents believe to be useful in implementing needed educational reforms.

The second chapter of this document is a comprehensive literature review. In the third chapter, methodology and research procedures are delineated. Chapter Four of this study presents the research data as they relate to the research problem. Conclusions, implications and specific recommendations for educational administration at the state level drawn from the findings of the study, as well as suggestions for further research are presented in Chapter Five.

CHAPTER TWO

REVIEW OF LITERATURE

Literature related to educational reform, particularly applicable to structure evolving in state departments of education was reviewed. National education reports were reviewed as well as other reference materials which have relevance to organizational structure of educational administration at the state level. The context of the research and literature review effort related to state departments' administration of educational programs and services in local education agencies and public schools.

Following the literature and research review of state education reform efforts in this chapter is an examination of organizational vision and direction as expressed in mission and goals. Attention is then directed to organizational structural elements reported in the educational and business-related literature. The structural elements which emerged were in the areas of (a) organization configuration, (b) avenues for flexibility in roles and functions, (c) decentralized decision making structures such as site-based management, (d) modifications in training delivery models, and (e) organizational linkages to other agencies. Finally, a brief summary concludes the chapter.

Reform Movement Demands State Level Restructuring

The demands for educational reforms have been extensively articulated in national level reports and propelled by issues of economic competitiveness. Kirst (1988) indicated that the current reform movement was launched by A Nation At Risk: The Imperative For Educational Reform. This well known report by the National Commission on Excellence in Education (1983) and other "first wave" reform reports focused on educational efforts and higher performance standards (Sergiovanni & Moore, 1989). The second wave of reports, however, sought reform by context of education, i. e., professionalization, and governance and structure issues (Sergiovanni & Moore, 1989; Tyack, 1990). Reports addressed the emerging restructuring movement and the substantial changes occurring and anticipated in roles, relationships, training requirements and organizational structural elements. A consensus for fundamental redesign was echoed throughout reports (Carnegie Forum on Education and the Economy, 1986; National Governors' Association Center for Policy Research and Analysis, 1986; National Governors' Association, 1991; The Holmes Group, 1986; U.S. Department of Education, 1991).

At the National Governors' Association 1986 meeting, state takeover of seriously deficient districts was urged

(Tyack, 1990). To correct severe academic, management and fiscal deficiencies, state-operated school districts became reality in Jersey City in 1989; in Patterson, New Jersey, in 1991; and in Kendleton Independent School District, Texas, in 1991 (Wolk, 1991). State-operated school districts were viewed, however, as temporary intervention measures to correct identified systemic problems in local school districts (NJSA, 18A: 7A-15.1, 1987).

Many national reports have presented findings and conclusions which relate to concerns for an educated work force and global economic competitiveness. Kirst (1988) contended that a basic assumption on reform is the link between global "economic competition and education" (p. 319). Kirst continued, " An educated work force is considered crucial to higher productivity and adaptability to rapidly changing markets" (p. 319). Loss in economic productivity was also related to failure of schools by Smith and Lincoln (1988) and Hamby (1989), who depicted the severe societal economic losses resulting from excessive school dropout rates.

Broad sweeping changes in education have been called for in many national reports. Other reports have focused on transformation of education for an identified developmental level. For example, Turning Points: Preparing American Youth for the 21st Century (Carnegie

Council on Adolescent Development, 1989), focused on transforming middle grade schools. Regardless of scope of reports, implications for recommended restructuring reached to the state level system of education, including structural features of departments of education. Relief from compliance with non-essential regulations, support for professional development and extension of authority to school personnel to make changes were called for to implement the bold reforms set forth. In a plan for action the Carnegie Council on Adolescent Development (1989) suggested state level changes and assistance by asserting, "We ask states to consider new mechanisms for providing the incentives that will be required to bring about local collaboration between schools and community agencies" (p. 5).

Based on the premise that restructuring to meet the health and social needs of students is essential to achieving quality education for all, Code Blue: Uniting for Healthier Youth (National Association of State Boards of Education, 1990) discussed transforming educational opportunities for youth through improved health status. Recommended state level initiatives included modeling effective coordination through state agency collaboration, supporting local coordinating councils, delegating decision making to local levels, adopting flexible approaches to

local agencies, and reducing bureaucratic barriers to local collaboration. A major challenge was presented to change the way organizations operate to move toward linking and networking with appropriate agencies. Extensive interagency and interdisciplinary collaboration was recommended. A similar structural strategy viewed as a prerequisite to successful educational reform was recommended in Healthy Youth 2000, (American Medical Association, 1990). In this report states were charged with the responsibility for fostering horizontal alliances among statewide organizations and vertical alliances among community, state and national groups.

Demands for state level reforms reflected in national reports have also been the focus of state legislative mandates. For example, Kentucky enacted sweeping reforms in the Kentucky Education Reform Act of 1990 (Legislative Research Committee, 1990). Arkansas enacted a statute requiring the state to adopt the national educational goals (ASA, C. 6-11, 1987).

State department reform efforts have also been impelled by university-based groups. For example, a report from the University of Wisconsin-Milwaukee contended that the Wisconsin department's current structure under an elected chief state school officer led to ineffectiveness in solving the state's educational problems. Consequently,

"...a Wisconsin think tank advocated overhauling the state department of public instruction and making the job of its chief administrator an appointed, rather than an elected, post" (Wolk, 1991, p. 2).

Many state department restructuring efforts have been clouded or slowed by elements of uncertainty. Arizona's state department restructuring effort has been slowed by alleged fraud. The state Auditor General filed charges that department officials improperly distributed funds to districts and failed to follow established procedures in supervision of federal contracts (Pipho, 1990). California's department likewise reflected elements of uncertainty when confronted by a basic question of control; i. e., "Is the state superintendent's staff the staff for the state board?" (Pipho, 1990). More recently, the issue of "charter schools" has been proposed as a choice initiative in the state of California (Olson, 1992).

Determinants of state level education policy and structure have been varied and mosaic in nature. Equally clear changes have been demanded from many sources as the reform movement progresses.

Lessons from the corporate world have been examined by educators as they seek to solve current educational problems (National Association of State Boards of Education, 1991). Business and industry have been

challenged to compete in an emerging global market, while working within the confines of changing demographics, changing work ethics and changing family structures. Success often depends upon use of complex technologies (Branson, 1990; Merenda, 1989; Tichy & Devanna, 1986). External changes and trends have resulted in efforts to transform corporate organizations to be increasingly competitive and productive. These same changes and trends have proved to be the societal forces which challenge educational institutions to reform. Indeed, the national education goals have been viewed as a "blueprint to assure that the nation has an educated work force" (U.S. Department of Education, 1992, p. 1).

Mission and Goals: Organization Vision and Direction

The legitimacy of an organization is defined by its mission or organization purpose (Barnard, 1938; Parsons, 1960; Scott, 1967). Basic dimensions of organizational size and shape, asserted Scott, are adjusted in response to changes in the environment as the organization pursues goal attainment. Sergiovanni and Moore (1989) specifically set goal attainment in the context of education reform and suggested the essential nature of "group commitment to and consensus about organizational goals. . . ." (p. 292).

The American Management Association (1991) Handbook of Marketing for the Service Industries has drawn a profile of

successful service organizations. The profile included ten characteristics in the categories of defining quality, customer perspective, and organizational issues. One quality issue was defined as "a vision or mission statement that captures the essence of exactly how the organization serves customers" (p. 5).

Tichy and Devanna (1986) provided a thorough treatment of organic systems in the context of techniques used by transformational leaders of business organizations. One salient point of their discussion focused on mission definition and delivery. They viewed an overarching core value expressed in a mission definition as essential to an organic system. Involvement of individuals at all levels of the organization was identified as crucial to definition of the core mission and capacity for delivering mission.

Wanting "assurances that the Department of Public Instruction will be structured to provide the best state leadership, vision, and support to state policymakers, local school districts and schools in Delaware" (p. 1), the state board of education commissioned the National Association of State Boards of Education (1991) to conduct a study of the department. Speaking of the difficulties of making needed changes, the report asserted ". . . state education agency leaders throughout the nation have found it very difficult to redefine or redesign their agency's-

mission, functions, activities or organizational structure" (p. 9). Such difficulties were attributed to numerous external demands, lack of external assistance in improving organizational effectiveness and breadth of impact of department organizational changes.

Researchers who have looked intensely at school reform at the district level are Wissler and Ortiz (1988). Facets of restructuring included in their work were organizational priorities, organizational configuration, intentional leadership and the process of decentralization. Completing a case study and historical analysis of the Riverside Unified School District, the researchers concluded that, in regard to organizational change, decentralization is time consuming (taking eighteen years in this case) and quality of participation relates to identification with the mission of the organization. In addition to decentralization, Wissler and Ortiz (1988) presented findings regarding other organizational elements inherent in school reform efforts. These included establishment of organizational priorities in terms of mission and goals and changes in organization charts resulting in flattening the pyramidal hierarchy.

Mission and goals provide a focus or catalyst for organization structure. As Tichy and Devanna (1986) observed, "Leaders must choose their goals from among the

feasible set of alternatives the organization could pursue and design the organization to carry out the chosen strategy" (p. 97).

Organization Configuration: Reducing the Hierarchy

In "The Bureaucracy Busters," Dumaine (1991) discussed the dismantling of hierarchical bureaucracies in favor of a new model, "the adaptive organization" (p.36). The adaptive organization is viewed as one in which the tasks dictate the structure, in contrast to top executives imposing a hierarchical structure. According to Dumaine, aspects of the adaptive organization are taking shape at companies such as Apple Computer, Cypress Semiconductor, Levi Strauss, Xerox and Becton Dickinson, a manufacturer of high technology medical equipment.

Throughout much of the successful corporate world, the pyramid bureaucratic structure is being flattened. Informal structures are being formed, including work teams, task forces and partnerships (Dumaine, 1991). Such informal structures are being used because they improve competitiveness and facilitate service to customers. An adaptive organization, in contrast to a hierarchical organization, encourages employee creativity in companies with fast-changing markets (Dumaine, 1991).

In regard to the organic organization model, Tichy and Devanna (1986) stated, "In the structure area, network and

matrix structures are much more organic than hierarchical functional organizations" (p. 235). They cited reduction in the hierarchical organizational layers as an essential element for an organic, functional organization.

Commissioned studies of public education systems have included recommendations in the area of organizational structure of state departments of education. Price Waterhouse (1989), providing private consulting services to the Virginia Board of Education and the Virginia Superintendent of Public Instruction, set forth organizational structure issues in "Department-Oriented Findings and Recommendations" designed to assist the Department become more efficient and effective (pp. I-7, I-9; VI-38 - VI-48). Recommendations related to strengthening the department's organizational structure were identified in "Structural issues central to the Department's ability to achieve its goals and fulfill its functions" (p. VI-39). The Virginia Department of Education was not only advised to adopt structures and approaches that directly tie to its priorities, but was also advised to "reduce the vertical chain of command and delegate increased authority to local levels" (p. VI-46).

As a result of in-depth review and interviews within the Texas Central Education Agency, Price Waterhouse (1990) reviewers concluded that "while some [inadequacies] are

certainly a function of leadership style and personality, we are convinced the overriding issue is one of organization structure and distribution of authority" (p.IV-70). Consequently, a structural recommendation was formulated as follows:

> Develop new administrative and functional organizational structures which incorporate modern management principles for high performing service organizations such as flattened authority chains and matrix approaches to selected mission areas (p. IV-70).

In other state departments of education, changes have been implemented or are anticipated to reduce vertical layers in the hierarchy. Recent state department restructuring efforts which occurred in South Carolina revealed influence of business leaders in streamlining the organization (Wiseman, 1991). Vermont's state board of education focused on streamlining the decision-making process in order to devote more time to educational goals and less to routine matters (Schmidt, 1990).

Many state departments of education have considered restructuring in response to an intent to function more as a service agency and less as a regulatory agency. Among these states have been Massachusetts, North Carolina (Pipho, 1990), and West Virginia. Ohio's business leaders

have called for an overhaul of the state education department. Based on a recommendation of the Ohio restructuring committee, focus was expected to shift from auditing and monitoring to support, research and service (Wolk, 1991). Oklahoma's state school board has approved a restructuring plan designed to overhaul the state education agency's bureaucracy (Wiseman, 1991).

The impact of restructuring efforts on the numbers of vertical layers within state education administration is still emerging. While there is clearly an expressed intent to reduce numbers of vertical layers, there appears to be no broad consensus regarding the appropriate or optimum number of organization layers in departments of education.

Avenues for Flexibility in Roles and Functions

One concept especially germane to this study is the "organic" model of organizational structure. Organic organizations have been characterized as informal, flexible and adaptive, and appropriate for non-routine, creative tasks (Argyris, 1957; Burns & Stalker, 1961; Lawrence & Lorsch, 1967; Bolman & Deal, 1984). Consistent with the organic model, Bennis (1969) described (in what appears to have been prophetic language) organic organizational arrangements. He stated:

> Adaptive, problem-solving, temporary systems of diverse specialists, linked together by coordinating

> and task-evaluating executive specialists in an organic flux--this is the organizational form that will gradually replace bureaucracy as we know it.... I call these new style organizations "adaptive structures" (p. 34).

Wynn and Guditus (1984) have synthesized into outline form the characteristics of the organic model of organization based on the works of Burns and Stalker, Argyris, Likert, McGregor and other social scientists. Identified characteristics of the organic organization serve as a framework for decision making, work, tasks, commitment and a number of other functions.

Price Waterhouse (1990), in a commissioned study of the Texas Central Education Agency, cited structural approaches to improve work organization. These approaches included capacity for reconfiguring personnel to meet constantly evolving challenges, work teams to solve problems of broad scope, and decision-making authority within or close to work teams. Possible matrix-organized functions suggested were (a) research and development projects and (b) accreditation activities.

In another study Price Waterhouse (1989) recommended that the Virginia Department of Education establish structures which would enable formation of temporary, problem-solving teams to facilitate focus on major

interdisciplinary issues. The study cited rationale for this recommendation as trends in successful private and public sector entities. Consistent with this rationale, the American Management Association (1991) has asserted that an essential organizational structure issue relates to empowerment of employees to assist customers in any reasonable way.

While Beer et al. (1990) clearly indicated that structural changes alone are insufficient to achieve transformation in organizations, they included structural changes as an integral aspect of organizational renewal. One specific structural feature emphasized as essential for adaptive organization was fluid roles (Beer et al. 1990). Dumaine (1991) concurred with this conclusion. According to these writers, employee initiated teams, cross-functional teams and ad hoc teams are organizational structures which facilitate joint diagnosis of business problems. General Electric chief executive officer, Welch, echoed this concept when he insisted that an institution must take the rigidity out of its bureaucracy (Tichy & Devanna, 1986).

Fluidity or flexibility of roles and functions within departments of education is only beginning to evolve (National Association of State Boards of Education, 1991). Within the state of Vermont, department staff have been

assigned the task of revising agency regulations and procedures in response to mission shifting from support of teachers to support of student performance (Schmidt, 1990). The primary purpose of the restructuring effort in West Virginia was to ensure that functions and tasks were "aligned to accomplish the state board's educational mission and goals and those established by state legislation" (Marockie, 1991). New Mexico's planning council sought to redefine roles and relationships within the department (Pipho, 1990; Schmidt, 1990).

Primary elements seen in an organic system of organization were described by Tichy and Devanna (1986) to include networking and matrix configurations in the organizational structure and working teams that are small and autonomous. Efficiency of decision making was described as being enhanced by organizational fluidity with decisions being made on the basis of expertise rather than position.

Concepts of adaptive organizational behavior were espoused by March and Simon (1958). Related concepts were articulated by Parsons (1960) when he discussed organizational structure adaptation and by Scott (1981) in reference to open systems organization. Based on above cited works, organization outcomes and survival are influenced by interactions of persons within the

organization as well as personnel and resources within the surrounding environment. Flexibility favors systems maintenance and growth as inputs are processed and returned as environmental exchanges (Hanson, 1965; Scott, 1981).

Capacity for flexibility in roles and functions clearly favors organizational growth and adaptation. Less conclusive is how this capacity is being accommodated in state departments of education in order to solve educational problems and to provide optimal services to local education agencies and schools.

Decentralized Decision-Making Structures

Transformation of successful corporate organizations has invariably involved structural change (Tichy & Devanna, 1986). For example, the structural change of decentralization has been experienced by Burroughs Corporation, Honeywell, and Chrysler Corporation. Site-based management has been encouraged by General Electric. Participative management has been adopted by General Motors. Empowerment of front line employees such as drivers and mechanics has been undertaken by Schneider Transport (Tichy & Devanna, 1986). Earlier, Peters and Waterman (1982) had conveyed the necessity for excellent corporations to decentralize. They found that virtually all functions in excellent companies had been decentralized. At this same time, Naisbitt (1982), writing

in Megatrends, noted the trend toward decentralization within the private sector.

The concept of decentralized decision making through site-based management has not only been identified as essential for restructuring for improved productivity in business and industry, it has also been recognized as a concept in educational administration essential to improving schools and learning. School site management concepts and approaches have been discussed extensively by Sirotnik and Clark (1988), David (1989), Mojkowski and Fleming (1988), Saks (1990), Aronstein, Marlow and Desilets (1990), the Quality Education for Minorities Project (1990), and Odden and Kim (1991). The Business Roundtable, a coalition of approximately 200 corporations, supported a nine-point plan for restructuring education (Association for Supervision and Curriculum Development, 1991). One essential point for facilitating restructuring was identified as site-based decision making.

The Council of Chief State School Officers (1989) has identified a vital governance issue of school restructuring as decentralization. This governance concept referred to "decentralization of authority to the school site, and is aimed at allowing those closest to the student the flexibility to design the most appropriate education location and practice" (p. 9). Additionally, the move

toward site-based management was clearly articulated in America 2000: An Education Strategy (Alexander, 1991). In that regard, Odden and Kim (1991) stated, "Nearly all the proposed strategies for meeting the nation's ambitious education goals recommended increased autonomy for schools" (p. 11).

Decentralized decision making has focused on abandoning hierarchically imposed regulations and procedures in favor of locally pursued school improvements in the teaching and learning processes. This was derived from a philosophy that the ultimate power to change is within educators who work in local schools, and that increased student performance will result when people who are involved feel a sense of ownership and responsibility for the educational process (American Association of School Administrators, 1988).

Structural mechanisms to support site-based management have fallen into the categories of school choice, grants and incentives, and deregulation vehicles and efforts (National Governors' Association, 1991). Notable among the models for elementary school programs have been Slavin's Success for All schools, Levin's Accelerated Schools and Comer's School Development Program Schools. Secondary school models of note have included High School in the Community, New Haven; Sizer's Coalition of Essential

Schools; and Central Hower High, Akron (Strauber, Stanley & Wagenknecht, 1990).

Pilot projects and small-scale efforts have provided concrete examples and a context for discussion. Their long term value, however, depends upon whether systemic changes have been made to support successful innovation in all schools (National Governors' Association, 1991).

A wide view of structural changes in departments of education has revealed a number of attempts to design and implement new arrangements with the ultimate goal of improving schools and learning. According to the Council of Chief State School Officers (1989), "The design of the structure and organization of decision making has a profound effect on the direction and quality of change for schooling" (p. 11). This study sought to expand the knowledge base regarding the design of decentralized decision-making structures which are embraced by state departments of education as useful in facilitating decision making at the lowest possible level (i.e., school level).

Training Delivery Models

The necessity for staff development and modifications of training delivery models for mutual problem solving has been well documented (Bennis, 1989; Fawson & Smellie, 1990; Sergiovanni & Moore, 1989). Professional development and renewal have been emphasized by Gardner (1990), Goodlad

(1990), and Toth & Young (1987) as antecedent to improvements in teaching and learning. Branson (1990) noted that "the knowledge-base has increased vastly [and] the requirements for intellectual activities are increasing" (p. 8). Use of technology and cooperative arrangements have been viewed as essential to ensure a proficient level of problem-solving skills.

State efforts designed to enhance professional roles of educators have included structural vehicles such as academies and financial incentive programs. Notable among these have been the Lead Teacher/Restructured School Pilot Project in North Carolina, the Utah career ladder program, the School Incentive Reward Program of South Carolina, the Horace Mann Teacher program in Massachusetts and the voluntary Career Ladder Program in Georgia. New York's teacher incentive programs have included the "Mentor Teacher-Internship Program, the Teacher Opportunity Corps, and the Empire State Challenger Scholarship and Fellowship programs" (Council of Chief State School Officers, 1989, p. 27).

Price Waterhouse and its subcontractor, Pelavin Associates (1990), engaged by the Texas Office of the State Auditor to conduct a performance audit of the Texas Central Education Agency, recommended a modification in the delivery of technical assistance and training to local

agencies and schools. Their plan called for delivery of technical assistance and provision of services through Regional Educational Service Centers.

The Delaware state agency restructuring approach was characterized by organizational involvement with the design team being constituted by representation from various position levels within the department. With assistance of consultants from the corporate sector the design team utilized a systems approach to "structure the organization in a way to maximize its effectiveness and efficiency .... " (p. 31). Structural features emerging from the effort included an "interactive" organizational model, with an organizational structure expected to facilitate innovation and caring relationships. Further, writers anticipated that department focus would be directed to needs of school and local school staff in addition to needs of students.

Establishment of Structural Linkages

A key structural concept emerging in modern organizational evolution has been the notion of linkages. Within the literature, the structural mechanism of linking has been used in two contexts: (a) linkages among subunits within the organization (Bennis, 1969; Bolman & Deal, 1984; Scott, 1967; Scott, 1981; Scott & Hart, 1979) and (b) linkages between the organization and outside units within the environment (Harman, 1987; Tichy & Devanna,

1986; U.S. Department of Education, 1991). Within the context of systems theory both dimensions are necessary to the prime organizational goals of growth and interaction (Scott, 1967). The intrapart interactions, or links within the organization, derive from the technical or efficiency considerations. Gardner (1964) had suggested a related concept, personnel rotation, as a vehicle for fostering organizational change and renewal. Bolman and Deal (1984) indicated that dependence on lateral as opposed to vertical coordination facilitates autonomy, problem solving and decision making within the organization.

In addition to linking mechanisms within the organization, interorganizational linkages, which allow organizations to unite with external constituencies, have become important vehicles for coping with environmental influence (American Medical Association,1990; National Association of State Boards of Education, 1990). Establishing favorable environmental links permits the organization design to evolve into an adaptive structure (Harman, 1987; Hoy & Miskel, 1987; U.S. Department of Education, 1991).

According to Dumaine (1991), one "hallmark of the adaptive organization is its openness to outsiders" (p. 46). Use of alliances, partnerships, and linkages have characterized companies that are adaptive

organizations. Fawson and Smellie (1990) emphasized the need for education agencies to form links with business, industry and colleges in order to optimize technology utilization in educational reforms.

Implications for educational administration from business restructuring can be drawn, according to the National Association of State Boards of Education (1991). Specifically, removal of divisive "old line structures" and formation of new structural arrangements are needed to encourage initiative and cooperative efforts (p. 19).

Linking mechanisms have been attempted or established in various state departments of education. In Virginia, a university consortium was established to assist with research, policy development, and information systems. In a related move, the secretary of education in Pennsylvania proposed restructuring the department in order to create stronger links and improve communication between the department and the governor's office (Research for Better Schools, 1991). The electorate, however, expressed its support for control of schools by the state board of education. Maryland has established a partnership link with Westinghouse in order to focus on customer driven operations (Research for Better Schools, 1991).

Social service agencies, universities, and business and industry are some of the agencies and groups with which

linkages are being anticipated and implemented in state departments of education. The relative effectiveness of various external linking mechanisms utilized by departments of education is not extensively addressed in the literature (National Association of State Boards of Education, 1991). This study sought to extend the knowledge base regarding linking efforts of state departments of education and the expected benefits to be derived for education administration.

Summary

The review of the literature and research related to educational restructuring efforts in state departments of education revealed organizational structural evolution. Such evolutionary changes appear to be driven by changes in vision and direction, as reflected in mission and goals, and appear to be reflected in five organizational structural elements. These elements are (a) organization configuration resulting in flattening the hierarchy, (b) avenues to permit and encourage flexible, adaptive roles, (c) development of facility for decentralized decision making through site-based management, (d) development or revision of delivery models for educational staff development and training, and (e) establishment of linkages to outside organizations and agencies.

This review examined organizational structural parameters considered in the literature, including studies of state education agencies conducted by private consulting firms and state education associations. It examined structural changes in successful business and industry as reported in the literature and attempted to summarize those concepts that apply to educational administration at the state level. Additionally, this study looked at the varied structural changes occurring in departments of education throughout the nation and identified areas where there is a need for a broadened information base. From the varied literature sources and from the research conducted, the structural evolution occurring in state departments of education has been examined.

CHAPTER THREE

RESEARCH PROCEDURES

Introduction

Descriptive research methods were used to accomplish the study's purpose of determining the nature of structural changes evolving in state departments of education which are perceived by state superintendents as useful in implementing educational reforms. Structural mechanisms that were identified by state superintendents as useful for educational problem solving and decision making were categorized. The population was constituted by chief state school officers or their designee in the fifty states and the District of Columbia for a total of fifty-one state departments of education. A sample of 27 was derived using regional and economic base data reported in Statistical Abstract of the United States, 111th Edition (U.S. Department of Commerce, 1991).

Since a mail questionnaire used to gather data from respondents was designed specifically for this research project, no comparable data from other studies were available for comprehensive validation of study findings. Validation measures which were followed included a pretest of the questionnaire by a select group of experts. Specifically, seven state superintendents of schools or their designee in six states reviewed a draft of the survey

instrument, and provided comments. The panel of experts was asked to evaluate the questionnaire to determine whether the items/questions appropriately addressed the research problem (Appendices F and G). Input regarding format, clarity of items and logical flow of items was requested. Additionally, the panel of experts was invited to offer other suggestions or comments of their choice.

Comments and recommendations from the experts were carefully analyzed and incorporated as appropriate into the survey instrument. Changes resulting from pretesting the questionnaire included minor language changes in some items and expanded response options for a few items. The data collection instrument was not fundamentally altered, however, as a result of the pretest measures.

Following revisions resulting from pretest procedures, the mail questionnaire was distributed to subjects in the study. To complement and supplement data collected through the self-report questionnaire, each respondent was requested to provide source documents which explain selected areas.

Collected data were recorded, analyzed and presented in narrative form with support data in tabular form or in figures. Tabular treatment of data includes responses, relevant frequency distributions, and percentages. These research procedures provided the results of the study.

Population

The population for the study was chief state school officers as determined by a list secured from the Council of Chief State School Officers (Appendix A). It was anticipated that actual respondents hold such position titles as commissioner of education; secretary of education; state superintendent of schools; deputy, associate or assistant state superintendent of schools; or administrative assistant to the state superintendent of schools. Total population for the study was fifty-one, the fifty states and the District of Columbia, as reflected in the tabular presentation by the U.S. Department of Commerce.

Sampling Procedure

The intent of the study was to explore structural mechanisms in state departments of education from a national perspective. Since surveying the entire population would be unmanageable and resource intensive, the researcher determined to elect a mix of stratified and quota sampling (Ary, et al., 1972; Kerlinger, 1986), based upon regional and economic base stratification. The stratum of region was selected with a deliberate effort to obtain representativeness, while economic base was

chosen for representativeness and because of pervasive references in the literature to economic resources and educational reform.

Using Statistical Abstract of the United States, 111th Edition, three states were selected from each of nine regions: New England, Middle Atlantic, East North Central, South Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain and Pacific. States selected were those with the high, average and low economic base within each region. Economic base was operationally defined as Gross State Product (GSP), based on the most recent data from the survey of Current Business, 1988, U.S. Bureau of Economic Analysis (Appendix B). Because of extreme dollar figures in the distribution, the state with the "average" economic base in the region was defined as the state with the median GSP, in those instances where the state with the mean and the median differ. This selection process yielded results depicted in Figure 1, which includes the following 27 states for the sample: Arkansas, California, Connecticut, Colorado, Delaware, Florida, Hawaii, Illinois, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Mississippi, Missouri, New Jersey, New York, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, Utah, Vermont, Wisconsin and Wyoming.

Figure 1

Sample Selection

Region/State	Gross State Product (in millions of dollars)
New England	
Massachusetts	115,526
Connecticut	70,639
Vermont	8,636
Middle Atlantic	
New York	362,736
Pennsylvania	183,559
New Jersey	154,765
East North Central	
Illinois	209,666
Michigan	153,240
Wisconsin	76,922
West North Central	
Missouri	83,534
Kansas	42,472
South Dakota	9,802
South Atlantic	
Florida	177,729
Maryland	76,504
Delaware	11,706
East South Central	
Tennessee	72,328
Kentucky	53,135
Mississippi	31,830
West South Central	
Texas	303,510
Louisiana	74,426
Arkansas	31,633
Mountain	
Colorado	59,177
Utah	24,008
Wyoming	11,673
Pacific	
California	533,816
Oregon	41,278
Hawaii	19,320

Source: Statistical Abstract of the United States, 111th Edition. U. S. Department of Commerce, 1991, p. 439.

Methodology

Data needed to address the research problem were collected through a questionnaire (Appendix E). The instrument was developed by the researcher for the purpose of determining the structural elements evolving in state departments of education in response to the educational reform movement and for identifying which of these are perceived by chief state school officers as most useful for educational problem solving and decision making. The questionnaire addressed organization vision and direction as expressed in mission and goals and five structural areas. These areas were organization configuration, flexible roles and functions, decentralized decision-making structures, delivery models for training, and linkages to other agencies. In consideration of heavy demands on superintendents and high level administrators, the questionnaire was designed to be brief, and constructed primarily with predetermined response categories; however, limited open responses were permitted and encouraged.

A cover letter addressed to chief state school officers by name (Appendix D) accompanied the instrument. A stamped, self-addressed envelope was included for each respondent's reply.

As an additional measure designed to complement and supplement responses contained in the self-report

questionnaire, the researcher requested documents which explain or describe certain identified structural mechanisms. After a period of approximately three weeks, follow-up phone calls were made to secure documents in three states and to inquire regarding the survey in four states. A planned follow-up letter was not needed since the initial response included 23 of 25 states and the researcher had previously determined that an acceptable return rate of 15 states was required for the study to proceed.

Data Collection

The questionnaire sought to obtain descriptive data regarding organizational vision and direction as stated in mission and goals and in five structural areas related to the organization system and pattern in state departments of education. These five areas represented the predominant structural elements discussed in the related literature. In each of the areas, respondents to the questionnaire were asked to check the responses that describe the department's status regarding elements identified and to provide short answers regarding the elements.

Area one was designed to provide data regarding percentage of departments which have restated purpose in the form of mission and goals within the past five years. Additionally, respondents were asked to identify the office

or body which served as primary determinant for such restatements.

Area two was designed to provide responses which reflect organization configuration changes. Responses were requested regarding the extent to which departments have reduced vertical layers in the organizational hierarchy, and the perceived number of layers for efficient decision making.

Area three was designed to ascertain whether departments have adopted flexible, cooperative roles for professional specialists. Identification of documents such as position announcements, organization charts or job descriptions which legitimate such flexible roles and functions was requested.

Area four required responses which identify established decentralized decision-making structures such as site-based management structures. Further, this area was constructed to identify which of these structural elements are perceived by respondents as being useful for facilitating site level decision making.

Area five focused on delivery models for training. It was anticipated that data collected would identify delivery models such as academies, teleconferences, mentorships or internships which are being used for training for

educational problem solving for local education agencies and schools. The instrument also asked respondents to indicate which delivery model has been most useful.

The final area requested data regarding structrual links of departments of education to other agencies. Respondents were asked to identify the types of outside agencies with which departments of education have established structural links and to describe the benefit or service expected from each agency linkage. Structural links were defined as ties visibly represented on an organization chart or identified in mission and/or goals.

Data collection on the questionnaire allowed identification of respondent by position title. Additionally, it provided limited opportunity for open response regarding restructuring efforts in state departments of education.

To complement, supplement, and possibly clarify data collected in the questionnaire, descriptive data were collected in the form of documents which have special relevance to each state department's organization structure. Documents which were requested for such data analysis included:

1. Current mission statement and current goals.
2. Current organization chart.

3. Document which explains a useful structure for decentralized decision making such as site-based management.

4. Document which describes the structure of a useful training delivery model.

Data Processing

Data were systematically recorded by states and by responses as received. Data from the self-report survey instrument were considered the primary source of information with examination of documents serving to supplement or clarify responses to the mail questionnaire items.

Information regarding state identification was used on a singular basis only to assist the researcher in locating respondents and nonrespondents. In order to ensure anonymity respondents were ensured that such data would be reported in aggregate or anonymously when presenting findings and drawing conclusions. Information regarding respondent position title was included to serve as a point of reference for responses and to assist the reviewer in follow-up contacts.

Data were compiled and quantified along discreet categories established in conformance with the six study objectives delineated in Chapter One. It was anticipated

that qualitative data analysis would yield categories reflecting "internal homogeneity" and "external heterogeneity" as defined by Patton (1990, pp. 402-407).

Statistical techniques identified for analyzing data included frequency distribution and percentages. Additionally, the Chi Square test of significance was selected as applicable to area number one, the determinant of restatement of mission and goals. This test determines if there is a significant difference between observed frequency and expected frequency within the possible categories (Ary, et. al., 1972; Sprinthall, 1990); in this case, the three categories of judicial, legislative or administrative point-of-origin were identified.

Narrative description was planned as the primary form of data presentation. Tabular presentations or illustrations were anticipated in appropriate areas. The researcher expected to describe structural elements evolving in state departments of education in response to the educational reform movement. Findings derived were expected to reveal the perceptions of chief state school officers or their designee regarding useful structural mechanisms for educational problem solving and decision making.

CHAPTER FOUR

RESULTS OF THE STUDY

Introduction

To address the problem of determining the nature of structural changes evolving in state departments of education which are perceived by state superintendents as useful in implementing educational reforms, descriptive data were collected in several areas. Data were collected by means of a self-report questionnaire and requested documents. As a contextual dimension to the inquiry on structural changes, the study ascertained the proportion of state departments of education in which educational mission and goals have been restated in response to the current reform movement and identified the primary determinants of such restatements. Examination of structural changes in five areas based on formulated study objectives included:

1. Extent to which departments of education have reduced vertical layers in the organizational hierarchy and the perceived optimal number of layers for efficient decision making.

2. Whether departments of education have adopted flexible, cooperative roles and functions for professional specialists in response to restatement of mission and goals, and if so, identification of structural avenues which legitimate flexible roles and functions.

3. How state departments of education facilitate decentralized decision making such as site-based management, and identification of structure(s) perceived by state superintendents as being useful in enabling local decision making.

4. What delivery models for training and technical assistance to local education agencies and schools have been developed or modified in response to the current reform movement, and which delivery model(s) is (are) perceived by state superintendents as useful for educational problem solving.

5. Types of outside agencies with which departments of education have established structural links, and the primary benefits or services expected by state superintendents from such linkages.

Findings are presented in this chapter in narrative, tabular, and illustrative form with major findings for each study objective. Ancilliary findings are then presented. A brief chapter summary follows.

Participation in the Study

The population consisted of chief state school officers or their designee in the 50 states and the District of Columbia for a total of 51. The selected sample for surveying was stratified, based upon regional and economic base data, with the three states with the

high, average (median) and low economic base from each of the nine regions, for a total sample size of 27.

As anticipated, respondents included chief state school officers with such titles as Commissioner of Education or State Superintendent of Schools, or more frequently, their designee with such titles as Deputy Superintendent of Schools, Executive Deputy Superintendent or Assistant State Superintendent of Schools. Twenty four total responses were received from the sample of 27. Of these 22 were usable for a response rate of 81.5%. It had been previously determined that a minimum of 15 responses was required for the study to proceed. Because of the high response rate to the initial request, no follow-up letter was sent. Four follow-up telephone calls were made with inquiries regarding the questionnaire and documents, and three additional telephone calls were made with inquiries regarding documents.

Statistical Procedures

Data analysis included frequency distributions, percentages and Chi Square. Frequency distributions and percentages were computed as appropriate for questionnaire items #1 through #18. Questionnaire responses were codified as appropriate and entered into a computer software program, Statistical Analysis Systems (SAS).

Additionally, the Chi Square ($\chi 2$) test of statistical significance was used to analyze the data received in objective one relating to primary determinant of mission and goals. Chi Square is used as a test of significance when data are expressed as frequencies, proportions or percentages, and measures the differences of the observed frequency from the expected frequency (Sprinthall, 1990). The test was applied to determine if there existed a significant difference in results achieved and that which could be expected by chance alone.

Open-ended responses and explanatory notes were categorized and recorded. Information from documents was used to verify, clarify and supplement survey data.

Restatement of Mission and Goals

Of the 22 respondent states, 19 or 86.4% indicated that the mission of the state department of education has been restated within the last five years. All of these same states indicated that the goals of the state department of education have been restated within the last five years. Two states reported a restatement of goals, but not of mission, for a total 21 or 95.5% restatement of goals rate.

Determinant of restatement of both mission and goals was most frequently indicated to be an administrative decision. This occurred in 17 instances or 89.5% of those

states in which mission had been restated. Administrative decision was identified as primary determinant for goals restatement in 18 instances or 85.7% of states where goals had been restated.

Legislative mandate was identified as the primary determinant for mission restatement two times or 10.5% of states whose mission had been restated. Legislative mandate was identified as the primary determinant of goals restatement in three or 14.3% of states where goals had been restated. According to the responses, judicial action was neither the primary determinant for mission restatement nor goals restatement for any state.

When the primary determinant for mission restatement or goals restatement was administrative decision, the office or administrative body where the decision arose was identified. In 14 or 82.4% of instances, the decision regarding mission restatement arose with the chief state school officer and/or the state board of education. Three states (17.6%) reported that the action was due to direct intervention by the governor's office. Regarding goals restatement, the decision arose in the office of the chief state school officer or state board in 15 instances for 83.3%, with one state reporting that goals restatement was formulated by educational leaders in consultation with other government and business leaders. The decision arose

within the governors' office in three instances (16.6%). One state reported that restatement of mission and goals was being considered this year.

To determine whether the proportion represented by the responses to primary determinant for mission restatement and for goals restatement could have occurred by chance, the Chi Square test of significance was applied. The chance assumption for which the Chi Square test of significance was applied was that each of the three branches of government - executive, legislative and judicial - had an equal opportunity to influence the direction of education; thus, the primary determinant for mission and goals. For determinant of mission restatement, a statistically significant value was derived ($\chi 2=27.216$, df=2, $p=<.01$). For determinant of goals restatement, a statistically significant value was derived ($\chi 2=26.571$, df=2, $p=<.01$). Findings are indicated in Tables 1 and 2.

Table 1

Primary Determinant for Mission Restatement

	Category		
Frequency	Judicial	Legislative	Administrative
Observed	0	2	17
Expected	6.33	6.33	6.34

p=<.01.

N=19.

Table 2

Primary Determinant for Goals Restatement

	Category		
Frequency	Judicial	Legislative	Administrative
Observed	0	3	18
Expected	7	7	7

p=<.01.

N=21.

Expected frequencies for primary determinants of mission restatement and goals restatement were derived by chance rather than an a priori hypothesis. The Chi Square

based on chance was recalculated, deleting the judicial category in which no response was received. For determinant of mission restatement, a statistically significant value was derived ($\chi 2=11.84$, df=1, $p=<.01$). For determinant of goals restatement, a statistically significant value was derived ($\chi 2=10.71$, df=1, $p=<.01$). Findings are shown in Table 3 and Table 4, respectively.

Table 3

Primary Determinant for Mission Restatement, Recategorized

	Category	
Frequency	Legislative	Administrative
Observed	2	17
Expected	9.5	9.5
$p=<.01$.		

N=19.

Table 4

Primary Determinant for Goals Restatement, Recategorized

	Category	
Frequency	Legislative	Administrative
Observed	3	18
Expected	10.5	10.5
$p=<.01$.		

N=21.

More than half of the respondent states indicated that the national education goals had been formally adopted at the state level. Of the 13 states where respondents indicated that the national education goals had been adopted, two indicated that they had adopted an additional four goals, expanding the number to ten. Of the nine states where respondents indicated that the national education goals had not been adopted, two had adopted state goals that are a variation of the national goals. A summary of responses is depicted in Table 5.

Table 5

Adoption of National Education Goals at the State Level

Response	Frequency	Percent
Formally adopted, without modification	11	50.0
Adopted with modification	2	9.1
Adopted state goals that are variation of national goals	2	9.1
Not formally adopted	7	31.8

N=22.

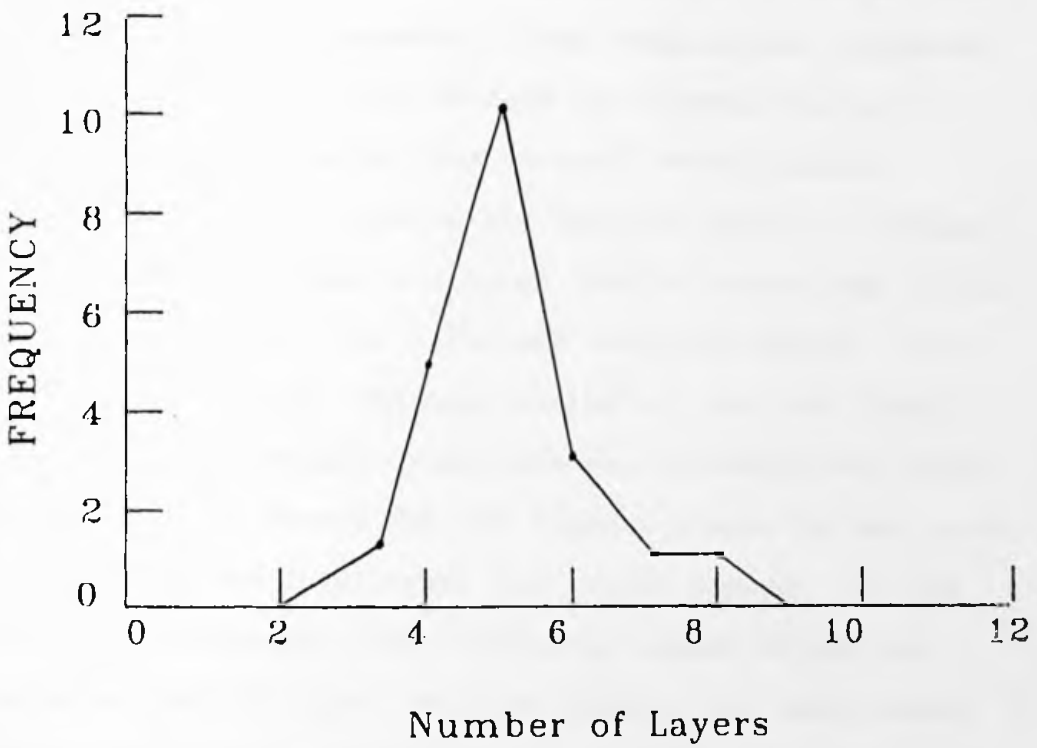
Organizational Hierarchy

Questions regarding the first structural element were designed to determine the extent to which departments of education have reduced vertical layers in the organizational hierarchy and the perceived optimal number of layers for efficient decision making. Total number of present layers was determined through a combination of questionnaire responses and examination of organization charts. Beginning with the lowest professional level and counting through the chief state school officer, the highest total number of organizational layers in any state was eight and the lowest number was three. Each number was reported by one state. The most frequently reported number was five layers, which was found in ten or 47.6% of state departments of education. From the completed questionnaire and documents submitted, the researcher was unable to determine the number of layers in one state. Total results regarding present numbers of layers and frequency of each number are depicted in Figure 2.

In response to the question, "Is this number of layers fewer than existed in the department five years ago?", six respondents answered "yes." Data from the six respondents indicated that two states have eliminated one layer and four states have eliminated two layers.

Figure 2.

ORGANIZATIONAL HIERARCHY
Departments of Education



Frequency of numbers of hierarchiacal layers in state departments of education

The current mean number of organizational vertical layers was 5.05, while both the modal and median numbers were 5.00. A cumulative total of 106 layers currently exists in the 21 respondent states, with a cumulative total of ten layers having been eliminated within the last five years.

Elimination of additional organizational hierarchical layers for efficient decision making was indicated as being desirable by six respondents. Four respondents indicated that the state was in the process of eliminating one or more layers or evaluating the vertical organization configuration at the time of the data collection. Fifteen or 68.2% of respondents indicated that no additional layers should be eliminated for efficient decision making. For these fifteen states, the mean number of vertical layers existing in the current organizational hierarchy was found to be 5.00. Six layers was the highest number in any state in this group and four layers the lowest number. Of the six states indicating that additional layers should be eliminated for efficient decision making, the mean number of vertical layers existing in the current organizational hierarchy was found to be 5.333, with eight layers found to be the highest number in any state in this group and three layers found to be the lowest number.

In analyzing vertical layer reductions in the organizational structure of departments of education, the the SAS Univariate Procedure yielded values from which projections might be made regarding future hierarchical reductions. Relevant values were as follows: N=21, mean (M)=.476, standard deviation (S)=.794, and standard error of the mean (Sx)=.1775.

Flexible Roles and Functions

Based on questionnaire responses, roles and functions for professional personnel in departments of education have been changed in response to restatement of mission and/or goals in 19 states or 86.4% of respondent states. Changed roles and functions were, by definition, characterized by expectations for flexibility. Flexible, cooperative roles were defined to mean relationships and responsibilities of professional personnel which allow interdisciplinary or intradisciplinary teaming or problem-solving approaches.

Structural avenues to legitimate flexible roles included three categories identified on the questionnaire: announcements of job vacancies, job descriptions and organization chart. Three additional avenues specified by respondents in the "other" category were assignment to interdepartmental task forces or interdisciplinary teams, required training and staff reduction. Most states have

employed more than one avenue. Job descriptions, announcements of job vacancies and assignment to interdisciplinary teams, the most frequently used structural avenues to legitimate flexible roles, were reported by 14, 12 and 9 states respectively. Categories and frequencies for all structural avenues are depicted in Table 6.

Table 6

Structural Avenues Legitimating Flexible Roles

Structure	Frequency	Percent
Job descriptions	14	63.6
Announcements of job vacancies	12	54.5
Assignment to interdisciplinary teams or task forces	9	40.9
Organization chart	8	36.4
Required training	2	9.1
Reductions in permanent staff	1	4.5

Note. Total of percentages does not equal 100 since respondents were asked to indicate all applicable structural avenues.

Focus of change in function of professional personnel within the department was described by respondents, and included more than one response in eight states. Focus of change was described as "regulatory to service" in 14 states. Focus of change was described as "compliance monitoring to technical assistance" in nine states and as interdisciplinary teaming in two states. Focus of change in function of professional personnel within departments of education was variously described by other respondents and included: 1) specialist to generalist, 2) expert to partner, 3) direct services to leadership and strategic and tactical thinking, and 4) establishment of statewide standards and assessment processes.

Shift from regulatory function to service function focus was not only predominant in questionnaire responses, but was also evidenced through documents. Examples of note included:

1. Outcome oriented planning and management.

2. Development of "Bill of Rights for Children" (1991, New York Board of Education).

3. Commitment to preschool education and services.

4. Prevention focused programs for children, youth and families.

5. Emphasis on achieving equity.

6. Requirement and strategies for inclusion of support staff on school improvement teams.

7. Focus on help for at-risk students.

8. Plans which address transition from school to work.

9. Collaborative ventures to locate social services at or near school sites.

10. Plans which address extended school year.

There was evidence that change in function of professional personnel within the departments of education is currently in process. Within three states, respondents expressly indicated such change is in process.

Decentralized Decision Making

Based upon survey responses received, 18 states or 81.8% of respondent states have established structures within the department of education which encourage or support decentralized decision making. Four identified categories of structural elements which facilitate site-based management were confirmed by survey results. These categories were: (a) local school governance bodies, (b) deregulation vehicles, (c) financial reward/award systems, and (d) training for site-based management. Two additional categories emerged from responses: (a) school "report card" and (b) accreditation system.

Regarding local school governance bodies, the specific structural mechanisms which were indicated to facilitate school based decision making included school improvement councils and faculty senates, with frequencies of 12 and 4 respectively. Among states which had local school governance bodies, such bodies were found to have been supported by legislative mandate in four states.

Regarding deregulation vehicles, the most frequent specific structural mechanisms which were found to facilitate school based decision making included: (a) waiver process from state board regulations, and (b) exemption mechanism from state laws. Two additional states indicated that systems had been established which allow for alternative compliance to accomplish standards. Use of deregulation vehicles is depicted in Table 7.

Table 7

Use of Deregulation Vehicles

Vehicle	Frequency	Percent
Waiver Process (from state board regulations)	18	81.8
Exemption Mechanism (from state laws)	8	36.4
Alternative Compliance (with standards)	2	9.5

Note. Total of percentages does not equal 100 since respondents were asked to indicate all applicable structures.

Regarding financial reward/award system for site-based management, four respondent states indicated that such mechanism was used to facilitate decision making at the lowest possible level (i. e., the school). Of these, one financial grant system was reported to be legislatively mandated.

Regarding training for site-based management, nine or 40.9% of respondent states indicated that such mechanism was used to facilitate decentralized decision making. In four of these states, the departments' of education

training efforts were most frequently implemented through workshops and seminars. Training for site-based management was also implemented through other avenues including regional centers, sponsorship by outside agencies, and through contractual arrangement with higher education. Training for site-based management was reported to be supported by business in one state.

The two emergent categories of mechanisms used to facilitate school site management included (a) school "report cards" and (b) accreditation system. Based on the information provided, however, the researcher was unable to determine the frequency of use of either mechanism.

An important part of the researcher's objective relating to site-based management was to determine which element(s) was (were) perceived by chief state school officers as being most useful for facilitating decision making at the school level. The response most frequently given regarding which was <u>most useful</u> was that it is "too soon to tell" or "unknown." The categories most frequently reported as <u>most useful</u> were local school governance bodies and training for site-based management, with a frequency of four each. Table 8 presents all responses by category.

Table 8

School Based Decision-Making Structures

	Perception of most useful	
Response	Frequency	Percent
"Too soon to tell," "varies," "unknown" or no response	9	40.9
Local school governance bodies	4	18.2
Training for site-based management	4	18.2
Deregulation vehicles	3	13.6
Quality Performance Accreditation	1	4.5
Requirement by state law	1	4.5

Delivery Models for Training

Respondents were asked to identify delivery models which have been developed or revised for training local education agencies and schools in response to the current education reform movement. Additionally, they were asked to identify the one delivery model among those named which has been most useful for facilitating educational problem solving. Six delivery models were listed and an additional open-ended option was included to allow respondents an opportunity to specify delivery models not provided as a

response on the survey form. The six named options were (a) seminars, (b) academies, (c) teleconferences, (d) instructional software, (e) internships, and (f) financial rewards for mentoring relationships. Of these six options, more than half the respondent states indicated that they use seminars, academies and teleconferences for delivering training for local education agencies and schools. The most frequently indicated option was seminars, with 18 or 81.8% of states using this delivery model for training. The model "academies" was indicated 17 times or by 77.3% of respondent states. The model "teleconferences" was indicated 16 times or by 72.7% of respondent states. Among the other three delivery models presented, financial rewards for mentoring relationships was indicated by ten states (45.5%), instructional software by eight states (36.4%), and internships by seven states (31.8%). Eight delivery models were specified in the open-ended option. Models specified were:

1. Requests for Proposal (RFP) from local education agencies.
2. Accreditation systems.
3. Partnerships with business.
4. Regional service centers.
5. Workshops and conferences.

6. Training networks.

7. Fellows program.

8. Teacher training centers.

Table 9 indicates all training delivery models which were reported by two or more states.

Table 9

Training Delivery Models

Response	Frequency	Percent
Seminars	18	81.8
Academies	17	77.3
Teleconferences	16	72.7
Financial rewards for mentoring	10	45.5
Instructional software	8	31.8
Internships	7	36.4
Regional service centers	2	9.1
Teacher training centers	2	9.1

Note. Percentages do not total to 100 since respondents were asked to indicate all applicable models.

A total of 14 delivery models were indicated or specified as having been developed or revised for training for local education agencies and schools in response to the current reform movement, with no state having "none."

Responses to the question, "In your opinion, which one delivery model checked in item #16 has been most useful for facilitating educational problem solving?", failed to confirm that one model is perceived as most useful. Of the models identified as most useful, "academies" were most frequently indicated, with a frequency of five for 22.7% of respondent states. Document review also confirmed extensive use of academies as a vehicle for teacher training. Additionally, in some states, the academy has been used as a model for leadership development for administrators. Results obtained regarding perceived usefulness of training delivery models are summarized in Table 10.

Table 10

Training Delivery Models, Relative Usefulness

	Perception of most useful for educational problem solving	
Response	Frequency	Percent
Insufficient data to measure, varies or no response	10	45.5
Academies	6	27.3
Seminars	3	13.6
Financial rewards	1	4.5
Teleconferences	1	4.5
Training networks	1	4.5

N=22.

Linkages to Other Agencies

Agencies with which state departments of education have established structural links were identified along with expected benefits of such linkages. Structural links were defined to mean "ties visibly represented on the organization chart or identified in mission and/or goals."

The type of agency most frequently linked with state departments of education was indicated to be state governmental agencies. This response was given by 18 states or 81.8% of respondents. Universities and colleges and private business were also frequently linked to state departments of education with a reported frequency of 17 each, for 77.3% of respondents. Two other types of agency linkages were reported by more than 50% of respondents. Links to professional organizations were indicated by 14 states, and links to private nonprofit agencies by 12 states for 63.6% and 54.5% respectively. Regional educational agencies and regional education laboratories were indicated 11 times each, for 50.0% of respondent states.

Open-ended responses and documents revealed formal linkages between departments of education and the National Alliance for Restructuring Education. Available data, however, did not permit the researcher to determine the frequency of this linkage.

Two states reported having no formal link with other agencies. Several states indicated informal, collaborative relationships with other agencies. Primary benefits or services expected from agencies with which departments of education are linked were identified.

Benefits expected from linkages with universities and colleges included: (a) improved or reformed teacher preparation, improved administrator preparation; (b) curriculum reform, curriculum development; (c) professional development, technical assistance; (d) college credit for high school students; (e) assessment instruments; (f) research; and (g) public support, collaboration. Of the named expectations, the most frequently indicated was improved or reformed teacher and administrator preparation, listed by eight or 47.1% of respondent states which reported linkages with universities and colleges. Professional development or technical assistance was indicated by five or 29.4% of respondent states who reported linkages with higher education institutions. Identified benefits expected from linkages with universities and colleges and their frequencies are presented in Table 11.

Table 11

Linkages with Universities and Colleges

Benefit Expected	Frequency	Percent
Improved preparation for teachers & administrators	8	47.1
Professional development	5	29.4
Research	3	17.6
Collaboration, public support	3	17.6
Curriculum reform, development	2	11.8
Assessment instruments	1	5.9
Credit for high school students	1	5.9

N=17

Note: Percentages do not total to 100 since respondents indicated none, one or more than one response.

State governmental agency links had been established to derive a variety of benefits and services. Those identified were: (a) family and children's services, health programs, social service programs; (b) public support, collaboration; (c) resources, financial support; (d) partnership, and (e) technical assistance. Family and children's services together with health and social service programs combine to represent responses from seven or 38.9% of respondent states who reported linkages with state

governmental agencies. Six or 33.3% of respondent states indicated collaboration and/or public support as expected benefits. Identified benefits expected from linkage with state governmental agencies and frequency of each are shown in Table 12.

Table 12

Linkages with State Governmental Agencies

Benefit Expected	Frequency	Percent
Family, children's services	7	38.9
Collaboration, public support	6	33.3
Resources, financial support	3	16.7
Partnership	1	5.6
Technical assistance	1	5.6

N=18

Note: Percentages do not necessarily total to 100 since resondents indicated none, one or more than one response.

Private nonprofit agencies were indicated to be linked to state departments of education for the following expected benefits and services: (a) new models (presumably for services); (b) school restructuring; (c) parent involvement; (d) mentoring; (e) collaboration; (f) direct services, resources; and (g) advocacy for children and

families. Of the benefits indicated, the one most often named was resources and direct services, with a frequency of four or 33.3% of respondent states who reported linkages to private nonprofit agencies. Collaboration was indicated by two respondent states for 16.7%. Every other expected benefit named from private nonprofit agencies had a frequency of one.

Private business was indicated to be linked to state departments of education for the following expected benefits and services: (a) partnership; (b) transition to work programs, workforce skills integration; (c) resources, financial support; (d) technology; (e) advocacy, public support; (f) technical assistance; and (g) curriculum reform. The most frequently named benefit was partnership. Five states or 29.4% of states who reported linkages to private business named partnership as the expected benefit from linkage of departments of education to private business. Transition to work programs and workforce skills integration, and advocacy and public support were named four times each, for 23.5% of respondent states. Table 13 presents reported expectations from private business and frequency of each.

Table 13

Linkages with Private Business

Benefit	Frequency	Percent
Partnership	5	29.4
Advocacy, public support	4	23.5
Workforce skills, programs	4	23.5
Resources, financial support	2	11.8
Curriculum reform	1	5.9
Technical assistance	1	5.9
Technology	1	5.9

N=17.

Note: Percentages do not total to 100 since respondents indicated none, one or more than one response.

Benefits expected from professional organizations ranged from shared vision to resources and financial support. Other benefits and services indicated were: (a) professional development, training and technical assistance; (b) support, collaboration; (c) program development, children's services; and (d) research. Of these, professional development, including training and technical assistance, was indicated by five or 35.7% of respondents who reported linkages to professional

organizations. Additionally, collaboration and public support was indicated by five or 35.7% of respondents who indicated links to professional organizations. Program development and children's services was indicated by four respondents, for 28.6%. Other responses named had a frequency of two or one each. A summary of benefits expected from linkages of departments of education with professional organizations is shown in Table 14.

Table 14

Linkages with Professional Organizations

Benefit Expected	Frequency	Percent
Collaboration, support	5	35.7
Professional development	5	35.7
Program development, children's services	4	28.6
Financial support	1	7.1
Research	1	7.1
Shared vision	1	7.1

N = 14.

Note. Percentages do not equal to 100 since respondents indicated none, one or more than one response.

Respondents named the following benefits and services expected from linkages with regional educational agencies: (a) leadership; (b) professional development, technical assistance, (c) reforms design; (d) public support, collaboration; (e) children's services; (f) media services; and (g) research. Of these, the category of professional development and technical assistance was most frequently named with a frequency of five, for 45.5% of respondent states who reported linkages to regional educational agencies. All other benefits and services named had a frequency of two or one each.

Respondents identified the following benefits and services expected from linkages with regional educational laboratories: (a) training, technical assistance; (b) evaluations, assessment systems; (c) research; (d) curriculum development (e) assistance with educational reform; and (f) collaboration, public support. Of these, the category of professional development and technical assistance was indicated most often, for a frequency of five or 45.5% of states reporting linkages to regional educational laboratories. Research was indicated two times for 18.2%. All other benefits indicated had a frequency of one each.

Ancillary Findings

Influence of Mission and Goals on Structure.

The researcher was eager to answer the question, "Do mission and goal statements drive structure of the departments of education?" A Green Mountain Challenge: Very High Skills for Every Student; No Exceptions, No Excuses (Vermont Department of Education, 1991) succinctly stated, "The goals drive all our activities" (p. 5). From responses and documents provided, the reviewer found extensive evidence that the question can be answered in the affirmative.

That mission and goal statements are driving forces for organizational structural elements is evidenced by the following representative examples:

1. The concept of standards and assessment is reflected in the mission and goals of Delaware, and the organizational structure is linked to the university system for assistance in development of standards and assessment instruments (Delaware State Board of Education, 1991).

2. The concept of strengthening administrative skills is reflected in the mission of California, and the organizational structure accommodates academies as a training delivery model for strengthening administrators' skills (Honig, 1987).

3. The concept of work place skills is reflected in the goals of Colorado, and the organizational structure is linked to private business for assistance in development of work place skills (Colorado Department of Education, 1989).

4. The concept of "health, human and social services" for children and families is reflected in the goals of Illinois, and the organizational structure is linked to state governmental agencies for accessing these services (Illinois State Board of Education, 1992, p.15).

5. The concept of shared decision making is reflected in the mission and goal statements of Kentucky, and the organizational structure facilitates development of local school management mechanisms.

6. The concept of "leadership to effect educational excellence" is reflected in the mission statement of Wisconsin, and the organizational structure provides the training delivery model "Lead Academy" for development of leadership skills (Wisconsin Department of Education, p.5, and Chart No. 5/15).

Relationship of Economic Base and Hierarchical Layers.

The researcher was curious to determine whether a relationship existed between numbers of hierarchical layers in state departments of education and economic base of states. Because the sample had been selected on regional

and economic base data, gross state product, the determination of the existance or nonexistance of such a relationship was possible.

The statistical procedure used for determining if a significant relationship existed between numbers of hierarchical layers and economic base was the Spearman rho rank-order correlation coefficient. This statistical correlation analysis is used when two variables are ranked or at the ordinal level of measurement.

Analysis began by converting raw scores to ranked data. In the first variable, gross state product was ranked from high to low. For example, California ranked number one and Vermont had a ranking of 21. In the second variable, state departments of education were ranked from high to low depending upon the number of hierarchical layers. One state was not included in the analysis because the researcher was unable to accurately determine the number of organizational layers from the survey response and documents submitted. The rho rank-order coefficient of correlation was calculated, modified with a T correction factor for tied rankings (Siegel, 1956, pp. 206-207). The procedure resulted in a statistically significant direct relationship ($N=21$, $r_s=.447$, $p=<.05$); i. e., states with a strong economic base were found to have a higher average number of layers than states with a weak economic base.

Reductions in Hierarchical Layers.

The researcher was interested in determining if reductions in the total number of vertical layers in the departments' organization have been significant. The current cumulative total number of vertical layers for the sample states was found to be 106, for a mean of 5.05 layers (N=21, M=5.05, SD=1.09). Based on survey responses (Appendix D, item #8), 106 layers were ten fewer than the cumulative total which existed within sample states five years ago (N=21, M=5.52, SD=1.47).

The difference between the paired scores was analyzed, using the *t*-test for nonindependent means, or paired *t*-test. The calculation, using PH STAT computer software (Sprinthall, 1990), resulted in obtaining a value of 2.682 (df=20) for the *t*-statistic to confirm a statistically significant difference (t=2.68, p=<.05). Additionally, five respondents indicated that reduction in layers of the department's organization is in process and/or being evaluated.

Restructuring in Process.

Findings indicated that restructuring of departments of education is in process. Open-ended responses and document review indicated that at least ten states from the

selected sample are currently in the process of restructuring the department of education. Five of these states anticipate substantial changes in 1993. Three indicated legislative mandates for restructuring. One indicated that review and modification of organizational structure is a continuous process with major evaluation every two to three years.

Impediments to Restructuring.

Respondents indicated that there are numerous impediments to restructuring departments of education. One respondent said the redesign was "incredibly hard to do." Other respondents identified impediments including (1) change in state superintendents and (2) current contractual provisions which impede change in roles and functions.

Summary of Findings

Results of the study have been presented in this chapter, indicating that structural elements in departments of education are evolving in response to the educational reform movement. Descriptive data, tables and figures, and statistical procedures were used for data analysis. The study found that mission and goals have been restated within the last five years in a vast majority of sample states with mission restatement in 86% of states and goals

restatement in 96% of states in this sample. Primary determinants of such restatements have been administrative decision, which arose most frequently with the state superintendent of schools and/or the state board of education. Less frequently, legislative mandate was the primary determinant of mission or goals restatements.

Evolving structural changes in departments of education included the following findings:

1. Vertical organizational layers have been reduced and the present average number is five layers. The perceived number of layers for efficient decision making averages less than 5.33, while two-thirds of states with a mean number of 5.00 layers indicated that no further reductions are needed for efficient decision making.

2. Roles and functions of professional personnel have changed in response to restatement of mission and/or goals in a vast majority of sampled states. The flexible nature of these changed roles has been legitimized through a variety of structural avenues, with job descriptions, announcements of job vacancies and assignment to interdisciplinary teams or task forces being reported most frequently. Focus of change in function was most often described as "regulatory to service."

3. A variety of structures which encourage decentralized decision making have been established in

nearly three-fourths of sample states. Deregulation vehicles, specifically, waiver process from state board regulations, and local school governance bodies, specifically, school improvement councils were most frequently found. Structures named by more than one state as being most useful included (a) local school governance bodies, (b) training for site-based management, and (c) deregulation vehicles. The results indicated that there is insufficient history and data to determine at this time which one structure is most useful in enabling local decision making.

4. A variety of delivery models for training and technical assistance for local education agencies have been developed or modified in response to the current reform movement. Seminars, academies and teleconferences were found to be extensively used models. Structures named by more than one state as being most useful included (a) academies, and (b) seminars, with academies being named twice as frequently as seminars. The results failed to confirm one model as being most useful for educational problem solving.

5. Formal links have been established between departments of education and other agencies in a vast majority of sample states, with 91% reporting one or more linkages. Departments of education reported linkages to a

wide range of public, professional, and private agencies. Results indicated primary benefits expected included a broad spectrum from advocacy to technical assistance to direct services to financial support. The link most frequently indicated was state governmental agencies, with family and children's services most frequently identified as the primary benefit expected from state governmental agencies. The expected benefit most often indicated for all categories was found to be improved or reformed teacher preparation and administrator preparation, through linkages with universities and colleges.

Ancillary findings were presented as follows:

1. Mission and goals statements were found to be driving forces for organizational structural elements.

2. A direct, significant relationship was found between numbers of hierarchical layers in departments of education and economic base of states.

3. The difference in total number of vertical layers in departments' organization five years ago and the present time is statistically significant.

4. Restructuring of departments of education is currently in process, with substantial changes anticipated within the next two to three years.

5. Numerous factors exist which impede the restructuring process in departments of education.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary of Purpose and Research Design

This study was conducted for the purpose of determining the nature of structural changes evolving in state departments of education which are perceived by state superintendents as useful in implementing educational reforms. As a context for the inquiry on structural changes, the study ascertained the percentage of state departments of education in which educational mission and goals have been restated in response to the current reform movement and identified the primary determinants of such restatements. Examination of structural elements included organizational hierarchy, avenues which legitimate flexible roles and functions, decentralized decision-making structures such as site-based management, training delivery models and linkages to other agencies.

The population for the study consisted of chief state school officers or their designee in the 50 states and the District of Columbia for a total of 51 state departments of education. The sample, stratified by regional and economic base data, included 27 states.

Descriptive methods were used to accomplish the study's purpose. A mail questionnaire designed specifically for the study was used to gather data.

Additionally, documents were requested and examined for the purposes of complementing, clarifying and supplementing data collected through the self-report questionaire. The questionnaire was pretested by seven state superintendents or their designee in six states (Appendix E).

Collected data were recorded, analyzed and presented in narrative form with support data in tabular form or graphic depiction. Tabular treatment of data included relevant categorizations, frequency distributions and percentages. Additionally, statistical analysis procedures included Chi Square, Spearman rho coefficient of correlation, and paired t-test where appropriate.

Conclusions

An examination of data collected and analyzed through this study resulted in several conclusions which relate to the primary research question and ancillary issues addressed by the researcher. Conclusions drawn from the study relate to restatement of mission and goals of departments of education, the context for structural changes, and to the nature of changes in five organizational structural areas.

The results from objective one of the study clearly indicated that in a high percentage of state departments of education, mission and goals have been restated during the

current education reform movement. This restatement of mission and goals, reflecting a reconceptualization of direction in an educational organization, supports conclusions of Tichy & Devanna (1986), Sergiovanni & Moore (1989), and the Price Waterhouse (1989) research conducted for the Virginia Department of Education. These conclusions were also captured by the American Management Association (1991) in regard to business and industry.

Determinant of both mission and goals was most frequently found to be an administrative decision arising with the state superintendent of schools or state board in approximately two-thirds of states. Since statistically significant positive values of primary determinant were derived based on proportion which could have been expected by chance alone, extreme caution is advised in interpreting results from any other perspective, including an a priori basis.

Conclusions regarding five structural areas are as follows:

1. The pyramid organizational configuration has been and is continuing to be flattened. Results indicated that, for the states surveyed, the mean number of vertical layers in departments of education has been reduced from 5.52 to 5.05 within the last five years, a significant (8.6%) reduction in the organizational hierarchy. This tendency

to flatten the hierarchy was consistent with predictions by Bennis (1966) and Gardner (1964). Further, the results lend support to the conclusions of Naisbitt (1982), Hanson (1985), Lewis (1986) Gardner (1990), Tichy & Devanna (1986) and Dumaine (1991), that flattening the hierarchy facilitates information exchange and decision making.

The number of hierarchical layers averaged 5.00 among the two-thirds of states who indicated that no further layers should be eliminated for efficient decision making, and 5.33 layers among the one-third who indicated that further layers should be eliminated for efficient decision making. The results indicated four states are in process of reducing layers or evaluating numbers of layers. Over a five year period, the data tend to suggest a trend in reductions of layers from which one could conclude or project with 66% confidence that the range of .30 to .65 contains the actual average number of organizational hierarchical layers that will be reduced in departments of education within the next five years.

2. Results indicated that a vast majority of state departments of education have adopted flexible, cooperative roles and functions for professional personnel in response to restatement of mission and goals. These flexible, cooperative roles allow interdisciplinary or intradisciplinary teaming or problem-solving approaches.

These findings support the work of Knowles (1983), Bohlman & Deal (1984), Tichy & Devanna (1986), Beer, Eisenstat & Spector (1990), Dumaine (1991) and the United States Department of Education (1991) who concluded that restructuring environments requires role flexibility for organizational adaptation and problem solving.

Six structural avenues were found to legimate flexible, cooperative roles and functions. In order of prevalence, these were (a) job descriptions, (b) job vacancies announcements, (c) interdisciplinary teams or task force assignments, (d) organization chart, (e) required training, and (f) reductions in permanent staff. That role flexibility is implemented through interdisciplinary teams especially confirmed conclusions by Bennis (1969), Price Waterhouse (1989), Beer, Eisenstat & Spector (1990) and Dumaine (1991).

Results indicated that the focus of change in function of professional personnel within departments of education has shifted from regulatory to service. This agrees with the conclusions of Pipho (1990).

Based on results, one must conclude that change in function of professional personnel is currently in process. Consequently, any conclusion regarding role and function change should be drawn in the context of this limitation.

3. Study results showed that departments of education facilitated decentralized decision making through established structures in three of every four states. Categories of elements which facilitated site-based management included (a) local school governance bodies, (b) deregulation vehicles, (c) financial reward/award systems, (d) training for site-based management, (e) school "report cards" and (f) accreditation systems. The findings supplemented the conclusions of Naisbitt (1982), Peters & Waterman (1982), and Tichy & Devanna (1986) regarding decentralization in successful business and industry. They also supported conclusions of Majkowski & Fleming (1988), Sirotnik & Clark (1988), David (1989), and Council of Chief State School Officers (1989) regarding school site management. Findings also confirmed two site-based management mechanisms noted by the National Governors' Association (1991), i. e., financial rewards and deregulation vehicles. Findings failed to confirm school choice (National Governors' Association, 1991) as a structural mechanism supported by departments of education to facilitate site-based management. Across all categories of structural elements named which facilitate site-based management, waiver process (from state board regulations), as a deregulation vehicle, was the specific element most

frequently indicated. Second most frequently indicated was school improvement councils from the category of local school governance bodies. These findings confirmed the conclusions of David (1989), who identified local school governance bodies and waiver process as key elements to facilitate school-based management.

No one decentralized decision-making structural mechanism emerged as "most useful" based on perceptions of chief state school officers. Categories most frequently named as "most useful" were local school governance bodies, training for site-based management and deregulation vehicles. Responses suggested that insufficient history and data exist to determine at this time which structure is most useful in enabling local decision making, or that usefulness may vary, depending upon a number of other factors.

4. Models for delivering training and technical assistance to local education agencies and schools have been developed or modified in response to the current reform movement in every state department of education surveyed. Thirteen delivery models were identified including (a) seminars, (b) academies, (c) teleconferences, (d) financial rewards for mentoring relationships, (e) instructional software, (f) internships, (g) regional training centers, (h) requests for proposal (RFP) from

local education agencies, (h) accreditation systems, (i) partnerships with business, (j) workshops and conferences, (k) training networks, and (l) fellows program. The findings supported the contentions of Bennis (1989), Branson (1990), Fawson & Smellie (1990), and Sergiovanni & Moore (1989), who indicated the necessity for staff development and modifications of training delivery models for mutual problem solving. The findings also lent support to concepts by Gardner (1990), Goodlad (1990), and Toth & Young (1987), who emphasized professional development and renewal as antecedent to improvements in teaching and learning. Specifically, modifying training to enhance problem solving through mentoring is consistent with conclusions by Gardner (1990), through technology with conclusions by Branson (1990), through academies and financial grants with conclusions by Council of Chief State School Officers (1989), and through regional training centers with conclusions by Price Waterhouse (1990).

Training delivery models perceived by state superintendents as "most useful" for educational problem solving were academies, seminars, financial rewards, teleconferences and training networks, with academies named most frequently. Results indicated, however, that no one training delivery model was conclusively perceived as "most useful" in a majority of states. Further, results

indicated that insufficient data exist and/or variation exists regarding which one model is "most useful" for educational problem solving.

5. Departments of education have established structural links with outside agencies in a vast majority of states. Types of agencies with which departments of education have established structural links include (a) state governmental agencies, (b) universities and colleges, (c) private business, (d) professional organizations, (e) private nonprofit agencies, (f) regional educational agencies, (g) regional education laboratories, and (h) the National Alliance for Restructuring Education.

That external linkages are useful vehicles for organizational adaptation and for alternative solutions for problem solving was the conclusion of the American Medical Association (1990), Association of Supervision and Curriculum Development (1990), Dumaine (1990), Fawson & Smellie (1990), Harman (1987), Hoy & Miskel (1987), National Association of State Boards of Education (1990), Scott (1967), Scott & Hart, (1979) and U.S. Department of Education (1991). This conclusion was confirmed by findings from this study which identified a wide spectrum of expected benefits from linkages to external agencies. Benefits ranged from professional development to direct family and childrens' services and from financial support

to advocacy. Specifically, improved or reformed teacher preparation and administrator preparation, family and childrens' services including health and social service programs, professional development and training and technical assistance, resources, and partnership with business ranked among the highest frequencies of benefits expected. Results indicated that linkage with regional educational laboratories was the weakest of the identified links.

General conclusions of the study can be drawn as follows:

1. Mission and goal statements were driving forces for organizational structural elements.

2. A direct relationship was found to exist between numbers of hierarchical layers in state departments of education and economic base of states; that is, states with a strong economic base had more layers than states with a weak economic base.

3. Restructuring of departments of education was in process with major changes yet to be determined and/or implemented in a majority of states in this study.

4. Achieving restructuring in state departments of education was characterized by administrators as complex and difficult. This conclusion agreed with a conclusion of the National Association of State Boards of Education (1991).

Implications

One implication of the study is that the bureaucratic organizational model, at least in a modified form, is likely to remain for the near future. Although the pyramidal organizational hierarchy is flattening, the rate of flattening does not suggest a drastic dismantling within the next five years. Less directive, more participative approaches than have previously existed in bureaucratic models may require a paradigm shift for many top level executives and for other members of educational organizations.

The changing roles and functions of professional personnel imply a need to reform professional preparation. That improved or reformed professional preparation was the top ranked benefit expected from linkages of departments of education with external agencies is particularly noteworthy. To complement the shift in focus from regulatory to service function, professional personnel may need to be trained in procedures and attitudes which emphasize service to "customers" and may need to work in more inclusive and cooperative ways with school service personnel. Additionally, many federal programs need redesign to focus on service, rather than regulation, while maintaining accountability.

The study provides evidence to suggest that appropriateness of site-based management structures may be determined by the conditions of given situations. Additionally, the appropriateness of various training delivery models should be evaluated in the context of local needs and local problems.

Departments of education as well as other educational organizations have many opportunities for development of links with external agencies. Strengthening these links could result in strengthened educational organizations and improved services to professional educators and to children. That state governmental links with departments of education have been relatively well developed has particular implications for extending the service delivery capacity for educational organizations.

Recommendations for Further Research

This study was limited to an examination of the nature of changes in structure evolving in state departments of education which are perceived by state superintendents as useful in implementing educational reforms. While state level reform is of great concern, to be an effective force in educational outcomes, reform must also focus at the district and school levels. Structural evolution at these levels of organization need to be examined, with a parallel research question at the district level.

The survey was further limited to one respondent in each sample state, the chief state school officer or designee. Surveying perceptions of persons with various positions within the organization could yield a larger sample number for statistical analysis and could permit comparison or contrast of perceptions among position levels within the bureaucratic hierarchy.

In addition to the limitation of organizational level, this study was further limited to one organizational component, formal structures. However essential changes in formal structures are to "reforms that last" (Kirst, 1988), other major components of the reform agenda need to be further researched. Among these are informal organization structures, cultural context, policy development, teaching and learning approaches, and technology advances.

There is a need to reexamine the organizational configuration to determine whether conditions of reducing vertical layers of the recent past and present continue in the future. Further, research is particularly suggested regarding the relationship of organizational hierarchy and economic factors. While no causal relationship is claimed based on results of this study, a direct relationship suggests further examination of financial factors which impact educational organizational

structure. Breadth of staffing as well as vertical organization layers might be considered in such a study.

Further research is needed to determine how professional personnel can best be trained to work in flexible, cooperative roles. Another question which might be examined is: "Does expectation for role flexibility as reflected in legitimating structures result in improved job performance?"

Many possible structures or mechanisms were found to be useful for facilitating site-based management. There is a need to build upon the data base of this study to determine the presently "unknown" dimensions of the relative usefulness of various mechanisms in given situations.

The relative usefulness of various training delivery models represents an additional area with considerable "unknown" factors. Usefulness of training delivery models need to be examined in the context of given situations.

Study findings revealed a weak link between departments of education and regional educational laboratories. Further research is recommended for the purpose of understanding the factors which contribute to this weak relationship and to determine how the link can be strengthened for educational research or other benefits.

The ultimate test of the value of changes in education lies in outcomes for students and the impact on teaching and learning. Therefore, it is recommended that further study be conducted at the local level to determine the impact of department of education structural changes upon educational outcomes.

Direction setting in education needs to be further explored. Determinants of mission and goals could be researched from an a priori hypothesis. In addition to determinants, the content of mission and goals needs to be further analyzed. Key terms which emerged repeatedly throughout mission statements suggest such categories as world class education, health and social services, equity, professional development, lifelong learning and higher order thinking. These and other findings suggest a vision which provides a basis for optimism regarding the outcomes of the education reform movement and the future of public education.

BIBLIOGRAPHY

Action Council on Minority Education. (1990). Education that works: An action plan for the education of minorities. Cambridge: Massachusetts Institute of Technology.

Alexander, L. (1991). America 2000: An education strategy. Washington, DC: U.S. Department of Education.

American Association of School Administrators. (1988). School-Based management. Washington, DC: Author.

American Management Association. (1991). The quality-leadership connection in service businesses. Marketing for the service industries. New York: Author.

American Medical Association. (1990). Alcohol and other drugs. Healthy youth 2000 (pp. 9-12). Chicago: Author.

Argyris, C. (1957). Personality and organization. New York: Harper & Brothers.

Ark. Stat. Ann. Section 6-11-102 (1987).

Aronstein, L., Marlow, M. & Desilets, B. (1990). Detours on the road to site-based management. Educational Leadership, 47(7), 61-63.

Ary, D., Jacobs, L., & Razavieh, A. (1972)). Introduction to research in education. New York: Holt, Rinehart & Winston.

Association for Supervision and Curriculum Development. (1990). What other approaches besides choice could address the problems? Public schools of choice (pp.30-31). Alexandria: Author.

Association for Supervision and Curriculum Development. (1991). Restructuring the education system: A View from business. Update, 33(5). Alexandria: Author.

Barnard, C. (1938). The functions of the executive. Cambridge: Harvard University Press.

Beer, M., Eisenstat, R., & Spector, B. (1990). Why change programs don't produce change. Harvard Business Review, 68(6), 158-166.

Bennis, W. (1966). Changing organizations. New York: McGraw-Hill.

Bennis, W. (1969). Organization development: Its nature, origins, and prospects. Reading, MA: Addison-Wesley.

Bennis, W. & Nanus, B. (1985). Leaders--The strategies for taking charge. New York: Harper & Row.

Bennis, W. (1989). Why leaders can't lead: The unconscious conspiracy. San Francisco: Jossey-Bass.

Bolman L. & Deal, T. (1987). Modern approaches to understanding and managing organizations. San Francisco: Jossey-Bass.

Branson, R. (Ed.) (1990). Issues in the disign of schooling: Changing the paradigm. Educational Technology (pp.7-10). Washington, DC: Association for Educational Communications and Technology.

Brickman, W. (1949). Guide to research in educational history. New York: New York University Bookstore.

Buckholtz, S. (1985). The management wheel. The positive manager. New York: John Wiley & Sons.

Burns, T. & Stalker, G. M. (1961). The management of innovation. London: Tavistock.

Burrell, G. & Morgan, G. (1980). Sociological paradigms and organizational analysis. London: Heinemann Educational Books.

Carnegie Council on Adolescent Development, (Hornbeck, D., Chair). (1989). Turning points: Preparing American youth for the 21st century. New York: Carnegie Corporation.

Carnegie Forum on Education and the Economy. (1986). A nation prepared: Teachers for the 21st century. New York: Carnegie Foundation.

Colorado Department of Education. (1989). 1989 Colorado State Board of Education goals. Strategies for excellence. (Available from Colorado Department of Education, Denver, CO. 80203).

Comer, J. (1988). Educating poor minority children. Scientific American, 259(5), 42048.

Council of Chief State School Officers. (1989). Education in the states, volume I: State education indicators 1987. Washington, DC: Author.

Council of Chief State School Officers. (1989). Success for all in a new centruy: A report by the Council of Chief State School Officers on restructuring education. Washington, DC: Author.

Center for Research on Elementary and Middle Schools. (1989). Success for all. Baltimore: Johns Hopkins University.

Darling-Hammond, L. (1990, December). Achieving our goals: Superficial or structural reforms? Phi Delta Kappan, 72(4), 286-295.

David, J. (1989). Synthesis of research on school-based management. Educational Leadership, 46(8), 45-53.

David, J. (1991). What it takes to restructure education. Educational Leadership, 48(8), 11-15.

Dumaine, B. (1991). The bureaucracy busters. Fortune, 123(13), 36-50.

Educational Research Service. (1990). Site-Based management: An information folio. Arlington, VA: Author.

Ellis, J. (1990). Positions in the division of urban education. [Memorandum regarding organization design and supporting documents]. Trenton: New Jersey Department of Education.

Fawson, W. & Smellie, D. (1990). Technology transfer: A model for public education. Educational Technology (pp. 19-25). Washington, DC: Association for Educational Communications and Technology.

Ferris, R. (1988). How organizational love can improve leadership. Organizational Dynamics, 16(4), 40-51.

Forgione, P. Jr. (1992). New directions for education in Delaware. Dover, DE: Delaware Department of Public Instruction.

Furhman, S. (1990). Are state-level reforms making a difference? Noteworthy. Educators around the world share their vision of a design for school year 2020 (pp.38-41). Aurora, CO: Mid-Continent Regional Educational Laboratory.

Fullen, M. (1982). The meaning of education change. New York: Teachers College Press.

Gardner, J. (1964). Self-Renewal. New York: Harper & Row.

Gardner, J. (1990). On leadership. New York: The Free Press.

Goodlad, J. (1990). Studying the education of educators: From conception to findings. Phi Delta Kappan, 71(9), 698-701.

Hamby, J. (1989). How to get an 'A' on your dropout prevention report card. Educational Leadership, 46(5), 21-27.

Harman, W. (1987, Winter). Preview. Global mind change: The book. Noetic Sciences Review, p. 20.

Hanson, M. (1985). Educational administration and organizational behavior. Boston: Allyn & Bacon.

Holmes Group, Inc. (1986). Tomorrow's teachers. East Lansing, MI: Author.

Honig, B. (1987). The California school leadership academy: An overview. (Available from 313 West Winton Avenue, Suite 463-A, Hayward, CA).

Hoy, W. & Miskel, C. (1987). Educational administration: Theory, research and practice (3rd ed). New York: Random House.

Illinois State Board of Education. (1992). Illinois goals: World-Class education for the 21st century. Springfield, IL: Author.

Kerlinger, F. (1986). Foundations of behavioral research (3rd ed). Fort Worth: Holt, Rinehart & Winston.

Kirst, M. (1988). Recent state education reforms in the United States: Looking backward and forward. Educational Administration Quarterly, 24(3), 319-328.

Knowles, M. (1983). Releasing the energy of others-Making things happen. Journal of Management Development, 2(2), 26-35.

Koerner, T. (1991, March). Restructuring, reform and the national goals. NASSP Bulletin, pp. 39-49.

Lawrence, P. & Lorsch, J. (1967). Organization and environment. Boston: Division of Research, Harvard Business School.

Lewis, J. Jr. (1986). Creating excellence in our schools by taking lessons from America's best-run companies. Westbury, NY: J. C. Wilkerson.

Lewis, J. Jr. (1986). Strategies for achieving excellence: Create an atmosphere of caring, intimacy and trust. Creating excellence in our schools (pp.177-. 192). New York: J. L. Wilkerson.

March, J. G. & Simon, H. (1958). Organizations. New York: John Wiley & Sons.

Marockie, H. (1991, March 29). Department restructuring. [Memorandum to staff regarding department restructuring process]. Charleston, WV: West Virginia Department of Education.

Marockie, H. (1991). Helping students succeed: Goals of the West Virginia Board of Education. Charleston, WV: West Virginia Department of Education.

Meckley, R. (1990). Addendum. Handbook of West Virginia school law (4th ed). Morgantown, WV: West Virginia University.

Merenda, D. (1989). Partners in education: An old tradition renamed. Educational Leadership, 47(2), 4-7.

Mojkowski, C. & Fleming, D. (1988). School-Site management: Concepts and approaches. Andover, MA: The Regional Laboratory for Educational Improvement of the Northeast and Islands.

Naisbitt, J. (1982). Megatrends: Ten new directions transforming our lives. New York: Warner Brothers.

National Association of State Boards of Education. (1990). Code blue: Uniting for healthier youth. Alexandria: National Association of School Boards of America.

National Association of State Boards of Education. (1991). Meeting the challenge: A framework for educational leadership. A Study Commissioned by the Delaware State Board of Education. Dover: Delaware State Department of Education.

National Commission on Excellence in Education. (1983). A nation at risk: The imperative for educational reform. Washington, DC: U.S. Government Printing Office.

National Education Goals Panel. (1991). Measuring progress toward the national education goals: Potential indicators and measurement strategies. Discussion Document. Washington, DC: U.S. Government Printing Office.

National Governors' Association. (1991). From rhetoric to action. State progress in restructuring the education system. Washington, DC: Author.

National Governors' Association Center for Policy Research and Analysis. (1986). Time for results. Washington, DC: Author.

N.J. Stat. Ann. Section 18-A:7A-15 (West 1989).

Odden, A. & Kim, L. (1991, October). Finance reform topples old structures; Resurges in new directions. The School Administrator, pp. 8-12.

Olson, L. (1992, February 26). With choice initiative as a backdrop, 'charter schools' proposed in California. Education Week, p. 19.

Parsons, T. (1960). Structures and process in modern societies. New York: The Free Press.

Patton, M. (1990). Qualitative evaluation and research methods (2nd ed). Newbury Park, CA: Sage.

Peters, T. & Waterman, R. Jr. (1982). In search of excellence. New York: Harper & Row.

Pipho, C. (1990). Stateline: 2. State departments: Change on the way. Phi Delta Kappan, 72(4), 262-263.

Presthus, R. (1962). The organization society. New York: Alfred A. Knopf.

Price Waterhouse. (1989). Meeting leadership challenges. Report to the Virginia Board of Education and Superintendent of Public Instruction. Washington, DC: Office of Goverment Services.

Price Waterhouse. (1990). Performance audit of the Texas central education agency. Washington, DC: Office of Government Services.

Provus, M. (1971). Discrepancy evaluation for educational program improvement and assessment. Berkeley, CA: McCutchan.

QEM Project. (1990). Education that works: Restructuring American schools. Education that works: An action plan for the education of minorities (pp. 45-52). Cambridge: Massachusetts Institute of Technology.

Ray, D. (1991, April). Technology and restructuring--Part II: New organizational directions. The Computing Teacher, p. 4.

Ray, M. & Myers, R. (1986). Creativity in business. Garden City, NJ: Doubleday.

Reecer, M. (1989, April). Joe Fernadez. The executive educator, pp. 19-36.

Research for Better Schools. (1991). SEA restructuring at a glance: Maryland. SEA restructuring at a glance: Pennsylvania (pp. 2-3). [Report from Region III/CCSSO retreat, Rehoboth Beach, Delaware, August 12-13, 1991]. Philadelphia: Author.

Saks, J. (1990, May). Shaping education behind the scenes. The American School Board Journal, pp. 23-25.

Schiller, R. & Freed, C. (1991). State education reform in the 1990s: One state's strategy. ERS Spectrum, 9(2), 17-24.

Schmidt, P. (1990, October 17). States redesigning roles, structures of education agencies. Education Week, pp. 1, 15.

Scott, W. G. (1967). Organization theory in a system framework. Organization theory: A behavioral analysis for management (pp. 124-129). Homewood, IL: Richard D. Irwin.

Scott, W. R. (1981). Organizations: Rational, natural, and open systems. Englewood Cliffs, NJ: Prentice-Hall.

Scott, W. & Hart, D. (1979). Organizational America. Boston: Houghton Mifflin.

Sergiovanni, T. & Moore, J. (Eds.). (1989). Schooling for tomorrow. Boston: Allyn & Bacon.

Siegel, S. (1956). Nonparametric statistics. New York: McGraw Hill.

Sirotnik, K. & Clark, R. (1988). School centered decision making and renewal. Phi Delta Kappan, 69(9), 660-664.

Slavin, R. & Madden, N. (1989). What works for students at risk: A research synthesis. Educational Leadership, 46(5), 4-13.

Smith, M. & Purkey, S. (1985). School reform: The district policy implications of the effective schools literature. Elementary Schools Journal, 85, 352-390.

Smith, R. & Lincoln, C. (1988). America's shame, America's hope: Twelve million youth at risk. Chapel Hill: MDC.

Spagnolo, J., Jr. (1991). A new vision for education. [Unpublished pamphlet]. Richmond: Virginia Department of Education, Office of Public Affairs.

Sprinthall, R. (1990). Basic statistical analysis (3rd ed). Englewood Cliffs, NJ: Prentice-Hall.

Strauber, S., Stanley, S., & Wagenknecht, C. (1990). Site-based management at Central-Hower. Educational Leadership, 47(7), 64-66.

Swanson, A. (1989, August). Restructuring educational governance: A Challenge of the 1990s. Educational Administration Quarterly, 25(3), 268-293.

Tichy, N. & Devanna, M. (1986). The transformational leader. New York: John Wiley & Sons.

Toepfer, C., Jr. (1990). Middle level school grades and program development. Schools in the middle: A report on trends and practices. Reston, VA: National Association of Secondary School Principals.

Toth, P. & Young, K. (1987). Strategic planning and creative leadership. Institute, WV: West Virginia College of Graduate Studies.

Tyack, D. (1990). 'Restructuring' in historical perspective: Tinkering toward utopia. Teachers College Record, 92(2), 170-191.

United States Department of Commerce. (1991). Statistical abstract of the United States (111th ed). New York: Holt, Rinehart & Winston.

United States Department of Education. (1991). Developing leaders for restructuring schools: New habits of mind and heart. Washington, DC: U.S. Government Printing Office.

United States Department of Education. (1992, January 13). Georgia governor calls for bipartisan reform. America 2000, p. 1.

United States Department of Labor. (1991). What work requires of schools. A scans report for America 2000. Washington, DC: Author.

Vermont Department of Education. (1991). A green mountain challenge: Very high skills for every student; no exceptions, no excuses. Montpelier, VT. Author.

Walker, R. (1991, January 26). Education reorganization legal, judge rules. Richmond Times Dispatch, p. 1A.

Walker, R. (1991, January 22). Hiring from within, state education chief says. Richmond Times Dispatch, p. 6A.

Weisman, J. (1991, February 20). Chiefs in Oklahoma, S.C. pledge to reorganize departments. Education Week, p. 1.

West, P. (1991, June 5). Disputes over control, direction slow technology initiatives. Education Week, pp. 21, 23.

West Virginia Board of Education. (1990, January). Helping students succeed: Directions for 1990. Charleston, WV: Author.

Wisconsin Department of Education. (Undated). Mission statement and Chart No. 5/15. Madison, WI: Author.

Wissler, D. & Ortiz, F. (1988). The superintendent's leadership in school reform. New York: Falmer Press.

Wolk, R. (Ed). (1991, September 11). Ohio business leaders call for overhaul of education department. Education Week, p. 2.

W. Va. Code Section 18-2E-5 (1991).

Wynn, R. & Guditus, C. (1984). Team management: Leadership by concensus. Colombus: Charles E. Merrill.

Ziskie, D. (1991, May/June). Texas education: Moving ahead. The MCG network newsletter. Washington, DC: Price Waterhouse.

APPENDIX A

COUNCIL OF CHIEF STATE SCHOOL OFFICERS

One Massachusetts Avenue, NW, Suite 700, Washington, DC 20001-1431 • 202/408-5505 • FAX 202/408-8072
Resource Center on Educational Equity State Education Assessment Center

DIRECTORY OF CHIEF STATE SCHOOL OFFICERS

March 1992

The Council of Chief State School Officers is a nationwide non-profit organization comprised of the 57 public officials who head the departments of elementary and secondary education in the 50 states, the District of Columbia, five extra-state jurisdictions and the Department of Defense Dependents Schools.

ALABAMA
Dr. Wayne Teague
Superintendent of Education
State Department of Education
Gordon Persons Office Building
50 North Ripley Street
Montgomery, AL 36130-3901
(205) 242-9700

ALASKA
Mr. Gerald Covey
Commissioner of Education
State Department of Education
Alaska State Office Building
Pouch F
Juneau, AK 99811
(907) 465-2800

AMERICAN SAMOA
Mr. Lealofi Uiagaleiei
Director of Education
Department of Education
Pago Pago, AS 96799
(OS) 633-5237

ARIZONA
Ms. C. Diane Bishop
Superintendent of Public Instruction
State Department of Education
1535 West Jefferson
Phoenix AZ 85007
(602) 542-4361

ARKANSAS
Dr. Burton Elliott
Director, General Education Division
State Department of Education
Four State Capitol Mall, Room 304A
Little Rock, AR 72201-1071
(501) 682-4204

CALIFORNIA
Mr. Bill Honig
Superintendent of Public Instruction
State Department of Education
721 Capitol Mall
Sacramento, CA 95814
(916) 657-5485

COLORADO
Dr. William T. Randall
Commissioner of Education
State Department of Education
201 East Colfax Avenue
Denver, CO 80203-1705
(303) 866-6806

CONNECTICUT
Dr. Marilyn A. Campbell
(Acting) Commissioner of Education
State Department of Education
165 Capitol Avenue
Room 305, State Office Building
Hartford, CT 06106
(203) 566-5061

DELAWARE
Dr. Pascal D. Forgione
Superintendent of Public Instruction
State Department of Public Instruction
P. O. Box 1402-Townsend Bldg., #279
Federal & Lockerman Streets
Dover, DE 19903
(302) 739-4601

DEPARTMENT OF DEFENSE DEPENDENTS SCHOOLS
Dr. John Stremple
Director
Department of Defense
Office of Dependents Schools
1225 Jefferson Davis Highway
Crystal Gateway #2, Suite 1500
Arlington, VA 22202
(703) 746-7844

DISTRICT OF COLUMBIA
Dr. Franklin L. Smith
Superintendent of Public Schools
District of Columbia Public Schools
415 12th Street, N.W.
Washington, DC 20004
(202) 724-4222

FLORIDA
Ms. Betty Castor
Commissioner of Education
State Department of Education
Capitol Building, Room PL 08
Tallahassee, FL 32301
(904) 487-1785

GEORGIA
Dr. Werner Rogers
Superintendent of Schools
State Department of Education
2066 Twin Towers East
205 Butler Street
Atlanta, GA 30334
(404) 656-2800

GUAM
Mr. Franklin J. A. Quitugua
Director of Education
Department of Education
Post Office Box DE
Agana, GM 96910
(OS) 671-472-8901

HAWAII
Mr. Charles Toguchi
Superintendent of Education
Department of Education
1390 Miller Street, #307
Honolulu, HI 96804
(206) 334-3310

IDAHO
Mr. Jerry L. Evans
Superintendent of Public Instruction
State Department of Education
Len B. Jordan Office Building
650 West State Street
Boise, ID 83720
(208) 334-3300

ILLINOIS
Mr. Robert Leininger
Superintendent of Education
State Board of Education
100 North First Street
Springfield, IL 62777
(217) 782-2221

INDIANA
Dr. H. Dean Evans
Superintendent of Public Instruction
State Department of Education
State House, Room 229
Indianapolis, IN 46204-2798
(317) 232-6665

IOWA
Dr. William L. Lepley
Director of Education
State Department of Education
Grimes State Office Building
East 14th & Grand Streets
Des Moines, IA 50319-0146
(515) 281-5294

KANSAS
Dr. Lee Droegemueller
Commissioner of Education
State Department of Education
120 South East Tenth Street
Topeka, KS 66612
(913) 296-3202

KENTUCKY
Dr. Thomas C. Boysen
Commissioner of Education
State Department of Education
Capitol Plaza Tower - 500 Mero Street
Frankfort, KY 40601
(502) 564-4770

LOUISIANA
Dr. Raymond G. Arveson
(Acting) Superintendent of Education
State Department of Education
Post Office Box 94064
626 North 4th Street
Baton Rouge, LA 70804-9064
(504) 342-3602

MAINE
Dr. Eve M. Bither
Commissioner of Education
Maine Department of Education
State House Station #23
Augusta, ME 04333
(207) 289-5800

MARYLAND
Dr. Nancy S. Grasmick
Superintendent of Schools
State Department of Education
200 West Baltimore Street
Baltimore, MD 21201
(301) 333-2200

MASSACHUSETTS
Dr. Rhoda E. Schneider
(Acting) Commissioner of Education
State Department of Education
Quincy Center Plaza
1385 Hancock Street
Quincy, MA 02169
(617) 770-7300

MICHIGAN
Dr. Robert E. Schiller
Superintendent of Public Instruction
State Department of Education
Post Office Box 30008
608 West Allegan Street
Lansing, MI 48909
(517) 373-3354

MINNESOTA
Mr. Gene Mammenga
Commissioner of Education
State Department of Education
712 Capitol Square Building
550 Cedar Street
St. Paul, MN 55101
(612) 296-2358

MISSISSIPPI
Dr. Richard Thompson
Superintendent of Education
State Department of Education
P.O. Box 771
550 High Street, Room 501
Jackson, MS 39205-0771
(601) 359-3513

MISSOURI
Dr. Robert E. Bartman
Commissioner of Education
Department of Elementary
& Secondary Education
Post Office Box 480
205 Jefferson Street, 6th Floor
Jefferson City, MO 65102
(314) 751-4446

MONTANA
Ms. Nancy Keenan
Superintendent of Public Instruction
State Office of Public Instruction
106 State Capitol
Helena, MT 59620
(406) 444-3680

NEBRASKA
Dr. Joseph E. Lutjeharms
Commissioner of Education
State Department of Education
Post Office Box 94987
301 Centennial Mall, South
Lincoln, NE 68509
(402) 471-5020

NEVADA
Dr. Eugene T. Paslov
Superintendent of Public Instruction
State Department of Education
400 West King Street
Capitol Complex
Carson City, NV 89710
(702) 687-3100

NEW HAMPSHIRE
Dr. Charles H. Marston
Commissioner of Education
State Department of Education
101 Pleasant Street
State Office Park South
Concord, NH 03301
(603) 271-3144

NEW JERSEY
Dr. John Ellis
Commissioner of Education
State Department of Education
225 West State Street, CN500
Trenton, NJ 08625-0500
(609) 292-4450

NEW MEXICO
Mr. Alan D. Morgan
Superintendent of Public Instruction
State Department of Education Building
300 Don Gaspar
Santa Fe, NM 87501-2786
(505) 827-6516

NEW YORK
Dr. Thomas Sobol
Commissioner of Education
State Education Department
111 Education Building
Washington Avenue
Albany, NY 12234
(518) 474-5844

NORTH CAROLINA
Mr. Bob R. Etheridge
Superintendent of Public Instruction
State Department of Public Instruction
Education Building, Room 194
116 West Edenton Street
Raleigh, NC 27603-1712
(919) 733-3813

NORTH DAKOTA
Dr. Wayne G. Sanstead
Superintendent of Public Instruction
State Department of Public Instruction
State Capitol Building, 11th Floor
600 Boulevard Avenue East
Bismarck, ND 58505-0440
(701) 224-2261

NORTHERN MARIANA ISLANDS
Mr. William S. Torres
Commissioner of Education
Department of Education
P.O. Box 1370 CK
Saipan, MP 96950
(OS) 322-6451

OHIO
Dr. Ted Sanders
Superintendent of Public Instruction
State Department of Education
65 South Front Street, Room 808
Columbus, OH 43266-0308
(614) 466-3304

OKLAHOMA
Ms. Sandy Garrett
Superintendent of Public Instruction
State Department of Education
Hodge Education Building
2500 North Lincoln Boulevard
Oklahoma City, OK 73105-4599
(405) 521-3301

OREGON
Ms. Norma Paulus
Superintendent of Public Instruction
State Department of Education
700 Pringle Parkway, S.E.
Salem, OR 97310
(503) 378-3573

PENNSYLVANIA
Mr. Donald M. Carroll, Jr.
Secretary of Education
State Department of Education
333 Market Street, 10th Floor
Harrisburg, PA 17126-0333
(717) 787-5820

PUERTO RICO
Ms. Celeste Benitez
Secretary of Education
Department of Education
Post Office Box 759
Hato Rey, PR 00919
(809) 764-6144

RHODE ISLAND
Mr. Peter McWalters
Commissioner of Education
State Department of Education
22 Hayes Street
Providence, RI 02908
(401) 277-2031

SOUTH CAROLINA
Dr. Barbara S. Nielsen
State Superintendent of Education
State Department of Education
1006 Rutledge Building
1429 Senate Street
Columbia, SC 29201
(803) 734-8492

SOUTH DAKOTA
Dr. John A. Bonaiuto
Secretary of Education
Department of Education & Cultural Affairs
700 Governors Drive
Pierre, SD 57501
(605) 773-3134

TENNESSEE
Dr. Charles E. Smith
Commissioner of Education
State Department of Education
100 Cordell Hull Building
Nashville, TN 37219
(615) 741-2731

TEXAS
Dr. Lionel R. Meno
Commissioner of Education
Texas Education Agency
William B. Travis Building
1701 North Congress Avenue
Austin, TX 78701-1494
(512) 463-8985

UTAH
Mr. Jay B. Taggart
Superintendent of Public Instruction
State Office of Education
250 East 500 South
Salt Lake City, UT 84111
(801) 538-7510

VERMONT
Mr. Richard P. Mills
Commissioner of Education
State Department of Education
120 State Street
Montpelier, VT 05602-2703
(802) 828-3135

VIRGINIA
Dr. Joseph A. Spagnolo, Jr.
Superintendent of Public Instruction
State Department of Education
James Monroe Building
Fourteenth & Franklin Streets
Richmond, VA 23216-2060
(804) 225-2023

VIRGIN ISLANDS
Dr. Linda Creque
Commissioner of Education
Department of Education
44-46 Kongens Gade
Charlotte Amalie, VI 00802
(809) 774-2810

WASHINGTON
Ms. Judith A. Billings
Superintendent of Public Instruction
State Department of Public Instruction
Old Capitol Building, Washington & Legion
P.O. Box 47200
Olympia, WA 98504
(206) 586-6904

WEST VIRGINIA
Dr. Henry Marockie
State Superintendent of Schools
State Department of Education
1900 Kanawha Boulevard, East
Building 6, Room B-358
Charleston, WV 25305
(304) 348-2681

WISCONSIN
Dr. Herbert J. Grover
Superintendent of Public Instruction
State Department of Public Instruction
125 South Webster Street
Post Office Box 7841
Madison, WI 53707
(608) 266-1771

WYOMING
Ms. Diana J. Ohman
State Superintendent of Public Instruction
State Department of Education
2300 Capitol Avenue, 2nd Floor
Hathaway Building
Cheyenne, WY 82002-0050
(307) 777-7675

COUNCIL OF CHIEF STATE SCHOOL OFFICERS
Mr. Gordon M. Ambach
Executive Director
Council of Chief State School Officers
One Massachusetts Avenue, NW
Suite 700
Washington, DC 20001-1431
(202) 408-5505

APPENDIX B

No. 710. Gross State Product: 1970 to 1986

[In millions of dollars, except percent. For definition of gross state product, see text, section 14. For explanation of average annual percent change, see Guide to Tabular Presentation. Minus sign (-) indicates decrease]

DIVISION AND STATE	1970	1980	1984	1985	1986	AVERAGE ANNUAL PERCENT CHANGE		
						1970-1980	1980-1985	1985-1986
United States	1,081,793	2,670,298	3,707,011	[illegible]	4,101,7[illegible]	10.2	7.5	[illegible]
New England	[illegible]	138,413	206,107	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Maine	3,887	10,200	14,782	[illegible]	17,328	10.1	9.2	9.0
New Hampshire	3,0[illegible]	9,328	14,844	[illegible]	18,818	11.8	12.1	11.7
Vermont	1,918	4,[illegible]	7,219	7,918	[illegible]	9.8	9.8	9.1
Massachusetts	28,820	66,087	96,980	108,148	118,828	[illegible]	10.0	[illegible]
Rhode Island	4,302	9,184	12,921	13,981	15,208	7.9	[illegible]	[illegible]
Connecticut	16,872	38,782	58,283	[illegible]	70,[illegible]	8.9	10.1	9.2
Middle Atlantic	201,798	478,306	[illegible]	661,363	781,0[illegible]	7.8	[illegible]	7.8
New York	106,902	214,143	311,727	338,071	362,736	7.2	9.2	7.8
New Jersey	38,467	88,818	131,778	142,302	154,788	8.7	9.8	8.9
Pennsylvania	56,421	125,547	162,383	172,990	183,549	8.3	6.5	6.1
East North Central	206,881	480,518	624,118	[illegible]	708,[illegible]	8.7	[illegible]	[illegible]
Ohio	53,171	121,842	158,543	167,844	176,102	8.8	6.4	5.0
Indiana	25,0[illegible]	59,060	76,0[illegible]	80,262	84,822	8.9	6.2	5.8
Illinois	63,485	143,110	187,484	198,138	209,[illegible]	8.8	6.8	5.8
Michigan	46,877	103,841	132,369	143,719	153,240	8.3	6.7	6.8
Wisconsin	20,280	52,876	68,636	72,718	76,822	10.1	6.4	5.8
West North Central	76,032	197,827	268,748	278,[illegible]	293,[illegible]	10.2	[illegible]	5.0
Minnesota	18,252	48,844	67,250	71,183	75,828	10.3	7.8	4.2
Iowa	12,917	34,442	41,407	42,100	43,838	10.3	4.1	4.1
Missouri	22,058	53,142	74,483	79,220	83,534	9.2	7.8	5.4
North Dakota	2,371	8,148	10,808	10,725	10,733	13.1	4.7	0.1
South Dakota	2,522	6,922	9,023	9,287	9,802	10.6	6.0	5.4
Nebraska	6,[illegible]	18,073	24,288	25,638	26,521	10.1	6.8	3.4
Kansas	10,018	28,0[illegible]	38,486	40,384	42,472	10.8	7.1	5.2
South Atlantic	137,297	[illegible]	573,331	631,768	671,881	10.9	[illegible]	[illegible]
Delaware	3,075	7,047	10,188	10,988	11,708	8.8	[illegible]	6.7
Maryland	18,250	44,812	64,488	70,580	76,804	9.4	9.3	8.4
District of Columbia	8,118	19,029	28,100	27,168	28,781	8.9	7.1	5.9
Virginia	20,448	58,634	87,599	96,348	104,188	11.1	10.0	9.2
West Virginia	7,090	19,187	22,868	23,541	24,088	10.5	3.9	2.4
North Carolina	22,138	58,876	87,748	93,831	100,981	10.3	9.4	7.6
South Carolina	9,[illegible]	27,275	38,681	41,632	44,727	11.0	8.8	6.9
Georgia	19,173	55,503	88,213	94,121	102,922	11.2	10.8	9.4
Florida	29,541	87,830	149,584	164,340	177,728	12.7	10.6	8.1
East South Central	48,598	138,288	191,088	201,632	212,308	11.0	7.4	5.3
Kentucky	13,883	38,828	49,812	51,234	53,135	10.2	6.3	3.7
Tennessee	15,541	48,018	63,207	67,580	72,328	11.2	6.2	7.1
Alabama	12,216	34,9[illegible]	48,710	51,818	58,007	11.1	7.8	5.8
Mississippi	6,[illegible]	21,470	29,637	30,818	31,830	11.8	6.8	3.3
West South Central	88,483	328,078	447,0[illegible]	488,108	480,3[illegible]	13.9	8.0	-1.9
Arkansas	6,485	20,123	28,718	29,838	31,833	12.0	7.8	5.7
Louisiana	16,784	62,168	79,004	78,718	74,428	14.0	3.0	[illegible]
Oklahoma	10,857	37,733	50,077	50,842	49,814	13.3	4.7	-2.0
Texas	54,357	208,047	288,238	307,815	303,510	14.2	8.8	-1.3
Mountain	38,321	141,178	194,882	207,638	218,473	13.8	7.4	4.3
Montana	3,058	9,525	11,728	11,543	12,183	12.0	4.2	5.4
Idaho	3,071	9,870	12,298	13,027	13,170	12.2	5.3	1.1
Wyoming	2,000	10,900	12,488	12,777	11,873	18.8	1.1	-8.8
Colorado	10,504	37,620	53,373	56,713	58,177	12.8	7.8	4.3
New Mexico	4,183	18,442	22,868	23,887	23,903	14.7	6.2	-1.2
Arizona	8,104	28,931	43,442	48,588	53,253	14.0	10.1	9.6
Utah	4,388	15,121	21,738	23,172	24,008	13.2	8.0	3.8
Nevada	3,068	11,870	18,390	17,918	19,428	14.8	8.4	8.4
Pacific	144,817	432,[illegible]	598,[illegible]	646,798	681,872	11.8	8.1	6.0
Washington	18,708	51,394	67,347	71,758	77,[illegible]	11.8	7.1	8.3
Oregon	9,728	30,219	38,[illegible]	38,922	41,278	12.0	5.3	6.1
California	111,631	325,171	458,874	[illegible]	533,818	11.3	8.6	7.4
Alaska	2,1[illegible]	12,[illegible]	20,[illegible]	21,237	19,678	19.4	7.3	-7.8
Hawaii	4,[illegible]	13,078	16,724	17,[illegible]	18,2[illegible]	11.1	6.7	7.4

Source: U.S. Bureau of Economic Analysis, *Survey of Current Business*, May 1988.

APPENDIX C

March 20, 1992

(Inside address)

Dear :

As a part of my doctoral studies at West Virginia University, I am conducting a research project on structural changes in state departments of education. The dissertation will examine the nature of structural changes in state departments of education which are considered by chief state school officers to be useful in implementing educational reforms.

Would you please assist me by responding to the enclosed questionnaire and comment form? Your participation in this pretest analysis is extremely valuable as I seek to ensure that items are clearly stated, that there is a logical arrangement of items, and that items are appropriate to address the research question.

The questionnaire and comment form will require about fifteen minutes of your time. A stamped self-addressed envelope is enclosed for your return of the completed questionnaire and comment form.

Upon completion of the research project, I will be pleased to provide a summary of study findings to respondent states who so indicate.

Thank you for your valuable assistance.

Sincerely,

Harriet Deel

APPENDIX D

April 22, 1992

Dear

As a part of my doctoral studies at West Virginia University, I am conducting a research project on structural changes in state departments of education. The dissertation will examine the nature of structural changes in state departments of education which are considered by chief state school officers to be useful in implementing educational reforms. The study involves 27 states, and participation by your state is extremely valuable for ensuring that the study is conclusive.

Enclosed is a questionnaire which will require about fifteen minutes of your time. In addition to completing the questionnaire, you are asked to provide selected documents which relate to your organization's restructuring efforts. Individual responses will be held confidential, with data being compiled and reported in aggregate format.

Please return the completed questionnaire and documents to me by May 12, 1992. A postage paid, self-addressed envelope is enclosed for return of the questionnaire. Since the number and size of documents will vary by state, it was not practical for me to send a postage paid return envelope for these materials. However, I would be pleased to reimburse your department for postage and/or photocopying if such would be helpful.

Your help in this study will contribute vital information regarding structures evolving in state departments of education which are perceived as useful in implementing educational reforms. I will be pleased to provide a summary of study findings to respondent states upon request.

Your assistance is deeply appreciated.

Sincerely,

Harriet M. Deel

APPENDIX E

RESTRUCTURING IN STATE DEPARTMENTS OF EDUCATION

SURVEY OF STRUCTURAL CHANGES

April 22, 1992

STATE DEPARTMENT OF EDUCATION RESPONSE FORM

Directions: In each question, place a mark (x) beside the item which represents the most accurate response and provide short answers as requested. Additionally, please provide requested documents. In order to ensure confidentiality of responses, information provided will be reported in the aggregate or anonymously. Questions regarding this instrument may be directed to the investigator, Harriet Deel, by calling (304)558-2708 (office) or (304)345-0570 (home).

Mission and Goals

1. Has the mission of the state department of education been restated within the last five years?

_____Yes
_____No

2. If you answered "yes" to question #1, please indicate the primary determinant for the restatement of mission.

_____Judicial action
_____Legislative mandate
_____Administrative decision. If administrative decision, please identify the office or body where the decision arose; i. e. governor, state board of education, state superintendent of schools, etc.

_____

3. Have the goals of the state department of education been restated within the last five years?

_____Yes
_____No

4. If you answered "yes" to question #3, please indicate the primary determinant for restatement of goals.

_____Judicial action
_____Legislative Mandate
_____Administrative decision. If administrative decision, please identify the office or body where the decision arose; i. e., governor, state board of education, state superintendent of schools, etc.

_____

5. Have the national education goals been formally adopted at the state level?

_____Yes
_____No

Organization Configuration

6. What is the total number of vertical layers in line relationships of the department's organization chart, beginning with the lowest professional level and counting through the chief state school officer?

_____2 _____6
_____3 _____7
_____4 _____8
_____5 _____9 or more

7. Is this number of layers fewer than existed in the department five years ago?

_____Yes
_____No

8. If you answered "yes" to question #7, how many layers have been eliminated? _____

9. In your opinion, should additional layers be eliminated in the department for efficient decision making?

_____Yes
_____No

Flexible Roles and Functions

10. Have roles and functions for professional personnel in the department of education been changed in response to restatement of mission and/or goals?

_____Yes
_____No

11. How have expectations for flexible, cooperative roles for professional personnel been established within the structure of the department of education? Flexible, cooperative roles are defined to mean "relationships and responsiblities of professional personnel which allow interdisciplinary or intradisciplinary teaming or problem solving approaches." Please chack all applicable structural avenues which legitimate flexible roles.

_____Announcements of job vacancies
_____Job descriptions
_____Organization chart
_____Other. Please specify. _____
_____None

12. If roles and functions of professional personnel within the department have been changed, how would you describe the focus of change in function?

_____From regulatory to service
_____From compliance monitoring to technical assistance
_____Other. Please specify. _____

Decentralized Decision Making Structures

13. Have structures been established within the department of education to encourage decentralized decision making?

_____Yes
_____No

14. Please check all of the following which have been established to facilitate site-based management. Site-based management is defined to mean "decision making at the lowest possible level; i. e., school."

(a) Local school governance bodies
_____School improvement council
_____Faculty Senate
_____Other. Please specify. _____
(b) Deregulation vehicles
_____Waiver process (from state board regulations)
_____Exemption mechanism (from state laws)
_____Other. Please specify. _____
(c) Financial reward/award system for site-based management. Please specify. _____
(d) Training for site-based management. Please explain. _____
(e) Other. Please specify. _____
_____None

15. In your opinion, which one element checked in item #14 has been most useful for facilitating decision making at the school level?

_____

Delivery Models for Training

16. Please check all of the following delivery models which have been developed or revised for training for local education agencies and schools in response to the current education reform movement.

_____Seminars
_____Academies
_____Teleconferences
_____Instructional software
_____Internships
_____Financial rewards for mentoring relationships
_____Other. Please specify. _____
_____None

17. In your opinion, which one delivery model checked in item #16 has been **most useful** for facilitating educational problem-solving?

_____

Linkages to Other Agencies

18. Please check all the following agencies with which the department of education has established structural links, and identify the primary benefit or service expected from each agency. Structural links are defined to mean " ties visibly represented on the organization chart or identified in mission and/or goals."

Agency	Benefit Expected
_____Universities/Colleges	_____
_____State governmental agencies	_____
_____Private nonprofit agencies	_____
_____Private business	_____
_____Professional organizations	_____
_____Regional education agencies	_____
_____Regional education laboratories	_____
_____Other. Please specify _____	_____
_____None	

19. If you would like to make additional comments regarding restructuring efforts in the state department of education, please use the following space for your comments.

20. Name of agency_____

21. Position title_____

Please include a copy of documents which would assist in a review of structural elements within the state department of education. Specific documents requested are:

1) Current mission statement and current goals;
2) Current organization chart;
3) Document which explains the site-based management structure named in item #15; and,
4) Document which describes the structure of the training delivery model named in item #17.

Please return completed questionnaire and documents to:

Harriet Deel
101 Kendra Drive
Charleston, WV 25311

Thank you for your assistance !

APPENDIX F

LIST OF STATES PRETESTING QUESTIONNAIRE

STATE	TITLE
Alabama	State Superintendent
Georgia	Deputy State Superintendent
Indiana	Policy Analyst
Maine	Commissioner of Education
Virginia	Deputy State Superintendent
West Virginia (2)	Assistant State Superintendent
	Assistant State Superintendent

APPENDIX G

Comment Form Regarding Questionnaire

COMMENTS

1. Are items clearly stated?

2. Are items logically arranged?

3. Is the format acceptable?

4. Does the questionnaire address the research question:
"What is the nature of structural changes evolving in state departments of education which are perceived by chief state school officers as useful in implementing educational reforms?"

5. Other comments

ABSTRACT

The purpose of this study was to address the nature of structural changes evolving in state departments of education which are perceived by chief state school officers as useful in implementing educational reforms. As a context for the inquiry on structural evolution, the study examined restatement of mission and goals in response to the reform movement. Examination of structural elements related to five areas: (a) reduction in vertical layers in the organization hierarchy, (b) adoption of flexible, cooperative roles, (c) decentalization of decision making, (d) delivery models for training and technical assistance to local education agencies and schools, and (e) linkages of departments of education with outside agencies.

Descriptive research methods were used to accomplish the study's purpose. Data were collected by means of a survey to a sample of 27 chief state school officers and through examination of requested documents.

Major conclusions were drawn as follows:

1. The pyramidal organization configuration has been and is continuing to be flattened. One-third of states indicated that further hierarchical layers should be eliminated for efficient decision making.

2. A vast majority of state departments of education have adopted flexible, cooperative roles and functions for

professional personnel in response to restatement of mission and goals. Six structural avenues were found to legitimate flexible roles. Change in focus of function has been from regulation to service.

3. Decentralized decision making was found to be facilitated through one to five established structures in nearly three-fourths of the states with waiver process, as a deregulation vehicle, most frequently indicated. School improvement councils, as a category of local school governance bodies, and training for site-based management were most frequently named as "most useful."

4. Models for delivering training and technical assistance were found to have been developed or modified in every state. Thirteen delivery models were identified, with no one model conclusively perceived as most useful. Academies were most frequently indicated as "most useful."

5. Departments of education have established structural links with external agencies in a vast majority of states. Those reported included a mix of public, private and professional organizations from which a wide spectrum of professional and direct services are expected.

APPROVAL OF EXAMINING COMMITTEE

Richard F. Meckley, Ph.D.

JoAnn Hall, Ed.D

Ken M. Young, Ed.D.

Joyce Waugh, Ed.D.

August 26, 1992
Date

Jack E. Yeager, Ed.D., Chair