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1979

A STUDY TO EXAMINE DIFFERENCES IN THE AUTONOMY OF SCHOOL SITES AS REPORTED BY PRINCIPALS FROM A NATIONAL SAMPLE OF SCHOOL DISTRICTS

By

John Malcolm Graves

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ABSTRACT

A STUDY TO EXAMINE DIFFERENCES IN THE AUTONOMY OF SCHOOL SITES AS REPORTED BY PRINCIPALS FROM A NATIONAL SAMPLE OF SCHOOL DISTRICTS

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A frequent concern in both popular and professional literature is the productivity or effectiveness of American public education. One proposed means of improving the organizational effectiveness of schools is to shift decision authority and discretion from the district level to the building level, i.e., increase the autonomy of individual school sites. Research evidence concerning the results or implications of different levels of site autonomy is limited. The purpose of this study was to inform and facilitate further research concerning school site autonomy by the development, application, and analysis of a method of identifying differences in the autonomy of school buildings or sites in a number of school districts.

Development of the method included the adoption of survey techniques, selection of principals as the appropriate persons to provide information, and construction of the format and items of the School Site Autonomy Inventory as an instrument representative of the structure and substance of the concept of school site autonomy. The method was applied to 1,106 elementary and secondary principals from a national random sample of 50 school districts enrolling 10,000 or more students. Completed Inventories were received from 51% of the individual principals. The analysis was based upon the Inventories from 48 districts which provided the required number of responses from elementary and

secondary principals. The data was analyzed in an effort to answer exploratory questions concerning the extent, dimensions, and consistency of variations in site autonomy and the degree to which districts were differentiated on the basis of the autonomy of their school sites.

The findings of the study included the following:

1. There were extensive differences in levels of autonomy reported by individual principals and in the district means for most decision items with the greatest differences being reported for decisions related to budget.

2. Clusters of decisions were identified by factor analysis with specifically defined dimensions being made up of items related to budget, allocation of staff resources, curriculum content and materials, and selection of instructional personnel.

3. The portion of total variation in autonomy attributable to differences between districts was substantial for a number of individual decision items, for several groups of items, and for an overall or general measure of autonomy, therefore within district consensus about autonomy was sufficient to justify consideration of school site autonomy as a district characteristic.

4. Consensus within districts about levels of site autonomy was greater among elementary and among secondary principals than among district principals generally.

5. There were definite differences among school districts in both overall levels of site autonomy and average degrees of consensus about autonomy.

6. Principals from districts which have claimed to be decentralized reported higher levels of school site autonomy than principals from districts generally and the highest levels were reported by principals from two districts with national reputations for providing extensive autonomy to school sites.

The method of identifying differences in levels of site autonomy developed, applied, and analyzed for this study was demonstrated to be a sufficiently valid and efficient research tool to justify its further development and refinement and its adoption for future investigation of school site autonomy.

To my parents,

Jennie and Everett Graves,

in appreciation for all they have provided,

especially their faith and their love

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CHAPTER I

INTRODUCTION

Background

The organizational effectiveness of schools has become an increasingly active concern among policy makers and professionals.[1] Decentralization has been proposed as a means of improving school effectiveness. Decentralization is closely tied to adaptability and adaptability is integrally linked to organizational effectiveness. That adaptability accompanies decentralization has long been identified as a "fundamental principle of American educational administration"[2] and adaptability is considered to be "a determinant of organizational effectiveness" or "equivalent to organizational effectiveness."[3] If effectiveness is equivalent to or a result of adaptability and increased adaptability may be achieved by decentralization, it does not seem unreasonable that decentralization should be proposed in response to concern for the organizational effectiveness of schools. A form of decentralization being currently proposed is a shift of authority and

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[1]Walter I. Garms, James W. Guthrie, and Lawrence C. Pierce, School Finance: The Economics and Politics of Public Education (Englewood Cliffs, NJ: Prentice Hall, Inc., 1978), p. 248.

[2]Francois S. Cillie, Centralization or Decentralization (New York: Bureau of Publications Teachers College, Columbia University, 1940), p. 4.

[3]Paul S. Goodman, Johannes M. Pennings, and Associates, New Perspectives on Organizational Effectiveness (San Francisco: Jossey-Bass Publishers, 1977), p. 3.

discretion from the district level to the individual building level or, in other words, an increase in the autonomy of local school buildings or sites.

Decentralization plans that emphasize educational decision making at local school sites have been adopted by individual school districts in a number of states and have been legislatively recognized in Florida[1] and California.[2] District organizational plans that include an increase in site autonomy as a central feature have been presented under a number of titles, most commonly, school-based management or school-site management. Advocates for such plans have advanced a number of claims regarding the benefits to be achieved by the devolution of authority and discretion to school sites.

Garms, Guthrie, and Pierce believe that their proposal which "shifts much of the responsibility for managing public schools to school sites, affords the best prospect for reducing the fiscal and political problems of local school districts."[3] The leadership of Monroe County, Florida School District sees decision making according to school-based management principles as allowing a school to "respond more effectively to the needs of its students and the community it serves" and as resulting in "better fiscal management" and "increased cost effectiveness."[4] Cross supports school autonomy because "it offers

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[1]Lawrence C. Pierce, Decentralization and Educational Reform in Florida (Bethesda, MD: ERIC Document Reproduction Service, ED 153 368, 1978), p. 2.

[2]Michael W. Kirst, "Beyond Serrano: Educational Reform in California," Compact 12 (Winter 1977):8-9.

[3]Garms, Guthrie, and Pierce, p. 264.

[4]School-Based Management (Key West, FL: Monroe County School District, 1978), pp. 1-2.

the best means of improving school quality."[1] Seeley states that "a school site management approach could greatly increase the empowerment of teachers, parents, and students alike, thereby reducing some of the worst evils of bureaucratic structure."[2] Monahan and Johnson suggest that "school districts typically are far more centralized than they should be," and that autonomous individual schools will be "creative, dynamic, responsive" and able to achieve "greater efficiency and effectiveness."[3]

The benefits claimed for increased site autonomy are significant, yet, like many other forms of decentralization, site autonomy has largely escaped empirical investigation. Lawrence Pierce, a leading proponent of school site autonomy plans, has noted a "lack of evidence that school-based management will in fact improve a district's quality of education."[4] In addition there are unresolved questions concerning several essential aspects of the theoretical formulations which have been used as the bases for policies of site autonomy. Increased school site autonomy may well provide or allow for important educational or organizational benefits, but as Marschak and Thomason have argued, "If making a district 'more decentralized' is to be proposed more widely as a management improvement, then it deserves to rest on a solid base of

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[1]Ray Cross, "The Administrative Team or Decentralization?" National Elementary Principal 54 (November/December 1974):82.

[2]David Seeley, Bureaucracy and the Schools (Bethesda, MD: ERIC Document Reproduction Service, ED 143 075, 1977), p. 9.

[3]William W. Monahan and Homer M. Johnson, Decentralized Decision Making Toward Educational Goals (Pacific Grove, CA: Homer Johnson Associates, 1973), pp. 22-23.

[4]Pierce, Decentralization, p. 22.

knowledge."[1]

Problem Statement

The general problem this research project seeks to address is an insufficiency of available knowledge concerning the educational and organizational implications of decentralizing the administration of school districts by increasing the autonomy of individual school sites. Within this general framework, of specific concern is the need for appropriate means of identifying variations in site autonomy. Empirical investigation of relationships between site autonomy and relevant individual, organizational, or environmental variables may be expected to proceed more effectively if based upon a clear understanding of and an efficient means of identifying the extent and dimensions of differences in autonomy. Current literature of educational administration provides only limited information concerning actual rather than assumed variations in site autonomy and little guidance concerning the effectiveness or adequacy of available methods of identifying such variations.

Statement of Purpose

The purpose of this research project is to inform and facilitate further research concerning school site autonomy by the development, application, and analysis of a method of identifying differences in the autonomy of school buildings or sites in a number of school districts. Development of the method includes the construction of a survey instrument, the School Site Autonomy Inventory, and selection of data gathering techniques. Application of the method involves the use

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[1]Thomas Marschak and Diana Thomason, Coordination Versus Local Expertise: A New View of School Decentralization (Bethesda, MD: ERIC Document Reproduction Service, ED 130 417, 1976), p. 4.

of the instrument and procedures to obtain data from a national sample of school districts enrolling more than 10,000 students. Analysis of the method involves an examination of the order found in the data obtained in terms of the extent, dimensions, and consistency of variations in site autonomy and the degree to which such variations provide for the differentiation of districts on the basis of the autonomy of their school sites.

Delineation of the Concept

Decentralization

> Decentralization of authority is one of the most fashionable catch phrases of modern administration. Having named a process, as is frequently the case, the complexities and subtleties of it become beclouded . . . It is important, therefore, to establish clearly both the general and specific meaning and intent of the concept of decentralization of authority in any given setting.[1]

Decentralization is a term which acquires meaning only as it is understood relative to centralization. According to Child, "Centralization is the extent to which the locus of authority to make decisions affecting the organization is confined to the higher levels of the hierarchy."[2] Hall also ties centralization to decision making by stating that "Of the several aspects of centralization, the most obvious is the right to make decisions. This can be very specifically spelled out in terms of who or what has the right to make which kinds of decisions and when."[3] Decentralization is then the extent to which

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[1]Bernard H. Baum, Decentralization of Authority in a Bureaucracy (Englewood Cliffs, NJ: Prentice Hall, Inc., 1961), p. 70.

[2]John Child, "Strategies of Control and Organizational Behavior," Administrative Science Quarterly 18 (March 1973):3.

[3]Richard H. Hall, Organizations: Structure and Process (Englewood Cliffs, NJ: Prentice-Hall, Inc., 1977), p. 182.

authority to make decisions affecting the organization is dispersed downward rather than confined to upper hierarchical levels. An organization is decentralized to the degree that decision authority is delegated from higher to lower hierarchical levels.

Subunit Autonomy

Within the boundaries of a general concept of decentralization there are a number of specific forms. As used by Becker and Gordon, decentralization refers to "the degree of autonomy across organizational subunits."[1] The autonomy of individual school sites as subunits within overall school district organizations is the specific form of decentralization to be investigated by this research project. Two aspects of autonomy should be noted. The first may be considered as the necessary condition of autonomy, that "activities of one component of the organization are independent of the activities of other components of the organization."[2] An individual elementary school that is able to adopt its own reading program irrespective of the program used in other elementary schools in the district could be said to have autonomy in this sense. The second aspect is what Etzioni calls "the degree of autonomy given to the unit in each issue."[3] Once it has been established that an individual elementary school may have a different or separate reading program, the issue becomes who will decide which reading program is to be used. The extent to which this type of

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[1]Selwyn Becker and Gerald Gordon, "An Entrepreneurial Theory of Formal Organizations-Part I: Patterns of Formal Organizations," Administrative Science Quarterly 11 (December 1966):337.

[2]Ibid.

[3]Amitai Etzioni, Modern Organizations (Englewood Cliffs, NJ: Prentice Hall, Inc. 1964), p. 28.

decision is determined by persons at the individual school rather than by district level officials or some higher level committee would establish the degree of autonomy the school has with regard to the issue.

Necessary limitations on the autonomy of organizational subunits have been noted by a number of writers. Simon, Smithburg, and Victor Thompson have commented that "no fully autonomous organizations exist in reality. The differences between self-contained groups and others are relative."[1] James Thompson used the term "conditional autonomy" and stated that a "fully autonomous unit would no longer be or remain a part of the organization."[2] Monahan and Johnson noted the institutional restraints on autonomy and commented that "When we speak of 'autonomy' what we really mean is autonomy within limitations placed by state laws, professional organizations, tradition, money and other factors."[3] Autonomy of subunits within organizations must not be viewed as an absolute but rather as a conditional or relative state. Questions of centralization or decentralization are always matters of degree that must necessarily be answered in some comparative or relative sense.

School-Based Management/School-Site Management

School site autonomy is usually not found in the literature as an independent concept but rather it is a term which may accurately be used to describe the central characteristic of a number of decentralized district organizational plans. The terms most commonly used to identify

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[1]Herbert A. Simon, Donald W. Smithburg, and Victor A. Thompson, Public Administration (New York: Knopf, 1950), p. 266.

[2]James D. Thompson, Organizations in Action (New York: McGraw-Hill Book Co., 1967), p. 58.

[3]Monahan and Johnson, p. 27.

such plans are school-site management and school-based management. Individual school districts have also adopted various names to identify their organizational plans which include some degree of site autonomy as a major component. These different identifying terms have in many cases acquired such generalized meaning that they fail to provide a sufficiently defined construct to allow meaningful empirical investigation based upon any qualitative or quantitative variation along some dimension of the construct.

The term usually associated with Florida's decentralized management plan is school-based management. Pierce's paper, "Decentralization and Educational Reform in Florida" describes school-based management as "a label given to the overall strategy of educational reform adopted by the Governor's Citizens' Committee."[1] The report of the Governor's Citizens' Committee covered a wide range of topics, many of which were only in the most indirect sense related to the devolution of authority and responsibility to individual school sites.[2] In California, school-site management has become closely associated with the whole package of educational reform legislation known as AB 65.[3]

Descriptions of school district decentralization plans which include site autonomy as a central characteristic are available from a variety of sources. There have been state level commissions or projects

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[1]Pierce, Decentralization, p. 2.

[2]Governor's Citizens' Committee on Education, Improving Education in Florida (Tallahassee, FL: Office of the Governor, 1973).

[3]Kirst, "Beyond Serrano."

that have emphasized site autonomy in New York,[1] California,[2] and Florida.[3] Such plans have been presented in books or articles by Pierce,[4] Guthrie,[5] Candoli,[6] Kirst,[7] Patterson and Hansen,[8] Cross,[9] Herman,[10] Cawelti and Howell,[11] and Garms, Guthrie, and Pierce.[12] Descriptions of decentralized autonomy plans are also available from

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[1]Commission on the Quality, Cost, and Financing of Elementary and Secondary Education, The Fleischmann Report on the Quality, Cost, and Financing of Elementary and Secondary Education in New York State, 3 vols. (New York: Viking Press, 1973).

[2]Erwin A. Decker, Site Management (Sacramento, CA: California State Department of Education, 1977).

[3]Governor's Citizens' Committee.

[4]See Lawrence G. Pierce, School Site Management (Palo Alto, CA: Aspen Institute for Humanistic Studies, 1977): Lawrence C. Pierce, "Emerging Policy Issues in Public Education," Phi Delta Kappan (October 1976):172-176.

[5]James W. Guthrie, "Social Science, Accountability, and the Political Economy of School Productivity," in Indeterminacy in Education, ed. John E. McDermott (Berkeley, CA: McCutchan Publishing Corp., 1976).

[6]I. C. Candoli, "The Urban School System," Theory Into Practice 15 (October 1976):243-252.

[7]Michael W. Kirst, "Returning Local Initiative to School Policymaking," The Generator 7 (Summer 1977):1-4.

[8]Jerry L. Patterson and Lee H. Hansen, "Decentralized Decision Making: It's Working in Madison," Educational Leadership 33 (November 1975):126-128.

[9]Cross.

[10]Jerry J. Herman, "If You Want Strong Principals, Give Them a Real Role," The Clearing House 49 (February 1976):271-272.

[11]Gordon Cawelti and Bruce Howell, "Help for the Man in the Middle," School Management 15 (March 1971):22-23.

[12]Garms, Guthrie, and Pierce, pp. 262-294.

various documents by South,[1] Monahan and Johnson,[2] Thayer and Beaubier,[3] Pierce,[4] and Powell.[5] Budgetary aspects of site autonomy have been discussed by Caldwell and Hodgson,[6] Duncan and Peach,[7] and Seward.[8] In addition a number of local districts have prepared documents which outline the decentralization or site autonomy plan adopted by that particular district.[9]

Components of the plans

A review of literature provided by Simpson identified 12 characteristics and 34 indicators which described school-based

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[1]Oron South, School-Based Management (Tallahassee, FL: Florida Department of Education, 1975).

[2]Monahan and Johnson.

[3]Arthur N. Thayer and Edward W. Beaubier, Participative Management and Decentralized Decision Making Working Models (Burlingame, CA: Association of California School Administrators, 1975).

[4]Pierce, School Site Management.

[5]Janet F. Powell, comp., "Decentralized Decision-Making," Educational Research Service Information Aid, 1975.

[6]Brian Caldwell and Ernest Hodgson, "Implementation of School-Based Budgeting," The Canadian Administrator 17 (January 1978):1-5.

[7]D. J. Duncan and J. W. Peach, "School-Based Budgeting: Implications for the Principal," Education Canada 17 (February 1977):39-41.

[8]Norman J. Seward, "Centralized and Decentralized School Budgeting: A Comparative Analysis," (Ph.D. dissertation, University of California, Berkeley, 1975).

[9]See School-Based Management; Escondido "Hidden Valley" Management System (Escondido, CA: Escondido Union School District, 1975); Decentralizations, Fairfield-Suisun's System (Fairfield, CA: Fairfield-Suisun Unified School District, 1976); Mt. Diablo Individual School Management System, "ISMS" (Concord, CA: Mt. Diablo Unified School District, 1978): Matthew Prophet, Responsible Autonomy and Community Involvement (Revisited) (Lansing, MI: Lansing School District, 1979).

management.[1] Based upon an analysis of the sources cited above and of the review provided by Simpson, the following components are presented as representative of the basic elements most commonly associated with school site management, school based management, or district decentralization plans that emphasize site autonomy:

1. site autonomy (administrative decentralization)
2. parent/community involvement (political decentralization)
3. participatory site level decision making
4. maintenance and adjustment of district level functioning
5. measurement and reporting of performance

Site autonomy (administrative decentralization)

The individual school building or site is to be the basic unit of educational management under the leadership of the principal in whom extensive authority and responsibility has been vested and who will be the educational manager responsible for the success or failure of the school. In order for the individual site to be the primary unit of educational management, decisions concerning the following types of items are to be made for each school site independent of other sites and be made by persons at the individual site:

- organization of the instructional program
- specific educational objectives for the school and its programs
- methods and materials used in the instructional program

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[1]Fredrick M. Simpson, "School-Based Management: Theory and Practice in Selected School Districts," (Ph.D. dissertation, The University of Florida, 1977).

- allocation and expenditure of a block or lump sum of general resources which are distributed to a site by the district based upon the number of students at the site and the needs of those students
- selection, assignment and supervision of staff at the school site
- supplies, equipment, and services to be used at the site
- supervision of students
- establishment and maintenance of parent/community relations

Parent/community involvement (political decentralization)

Parents and/or community members are to have a significant degree of involvement in site level decision making. Participation is most commonly to be in the form of some type of advisory committee. In other cases the involvement is to be more than advisory and parent or community representatives are to play an active decision role with regard to program, budget, or personnel selection--especially selection of the principal.

Participatory site level decision making

Site level decision are to be based upon wide participation of persons involved at the individual site. Delegation of decision authority to school sites is intended to be, and often assumed to be, accompanied by shared decision making at the site level.[1]

Maintenance and adjustment of district level functioning

Ultimate authority for establishing and ensuring the attainment of organizational goals is retained at the district level. Functions

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[1]It is also sometimes assumed that teacher autonomy will be increased by increasing site autonomy.

performed by district office personnel are to be adjusted in order to most effectively support and facilitate programs at the site level.

Measurement and reporting of performance

A district or statewide testing or assessment program is to be used for evaluating student performance and a comprehensive annual performance is to be published for each school site.

Independence of components

Although the five major components identified above are often proposed and adopted as a package, it is more appropriate that each be considered independently and that any interactions or causal relationships among or between components be investigated and not merely assumed. For example, if most of the program, budget, personnel, and operational decisions for a particular school site were made independently for that site by the principal, a high level of site autonomy would have been present. On the other hand, persons at the site other than the principal may have had no involvement in those decisions. Participatory decision making is commonly proposed as part of decentralization plans, but wide participation of site level personnel may be present or absent in any situation independent of the level of site autonomy. The distinction between administrative decentralization and participatory decision making is made quite clearly in the California Department of Education document on site management:

> participatory management can be a factor in any management system . . . its existence does not, in itself, denote decentralization. A more realistic way of determining whether or not a management system is decentralized is to identify the level at which decisions are made.[1]

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[1]Decker, p. 3.

Just as participatory management does not necessarily denote decentralization, decision authority at the building level does not necessarily indicate that the decision making processes within that building are participatory.

A similar point can be made with regard to political decentralization in the form of parent or citizens committee involvement in site level decisions. Administrative decentralization in the form of site autonomy may be present with or without a building level parent advisory committee. Administrative and political decentralization need not vary uniformily. Some form of political decentralization may commonly be associated with increased site autonomy but this is not necessarily the case in any logical sense. Considering the two types of decentralization from another perspective, Davies, Clasby, and Powers have pointed out the folly of political decentralization without administrative decentralization.

> Generous invitations to citizens to participate in shaping policies and programs at the local school level, for example, are just a sham if a school system is so rigidly centralized that no decisions are made at the school level.[1]

District level functioning and the measurement and reporting of performance are also types of activities which are carried out in some form or to some degree independent of the level of autonomy of individual school sites. These components, like the others that are commonly joined with site autonomy, are best considered as conceptually distinct from site autonomy. The terms commonly found in the literature to identify district organizational plans that include the devolution of

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[1]Don Davies, Miriam Clasby, and Brian Powers, "The Plight of Citizens" Compact 11 (Autumn 1977):21.

decision authority to individual school sites are usually descriptive of more than site autonomy. In order that the concept of school site autonomy might be clearly delineated, the major components of school-site management and school-based management have been listed and the school site autonomy concept differentiated from the other components.

Authority of the Principal

The level of autonomy of a school site is integrally related to and to a significant degree determined by the authority of the principal at that site. According to the Florida Governor's Citizens' Committee, "It is very difficult, probably impossible, to identify an outstanding school which has a weak principal. From both observation and systematic research, the principal appears to be crucial in maintaining instructional excellence in a school."[1] Garms, Guthrie, and Pierce stated that "If the school is the basic unit of educational management and its staff is held accountable for services provided, then the principal must have adequate authority to make changes according to the desires of parents and the school council."[2] The California Department of Education document on site management considered the role of principals as educational leaders and concluded that the "basic leadership role is enhanced if the decision-making authority and accountability for decisions are vested in the on-site administrator and if he or she has a major role in financial control, curriculum development, and staff selection."[3] Candoli et al reasoned that "If principals are to be held

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[1]Governor's Citizens' Committee, p. 183.

[2]Garms, Guthrie, and Pierce, p. 281.

[3]Decker, p. 6.

accountable for 'results,' it follows that authority for some measure of program decision making must be delegated to them."[1] Principal authority is generally accepted as a key element in effective administration of schools or school districts.

It should be obvious that principal authority is site level authority. Authority which has been delegated by the principal or authority which is exercised by site level personnel other than the principal or in addition to the principal is also site level authority. The variable to be investigated by this research is based upon the wider concept of site level authority. Principal authority is a primary component of site level authority and therefore of school site autonomy.

Definition of School Site Autonomy

As used in the research project, school site autonomy is defined as the extent to which decisions with respect to an individual school building or site are made specifically for that site independent of other schools in the district and are made by site level personnel at the individual school.

Rationale

Theoretical Framework

School site autonomy, as a form of administrative decentralization, is accomplished by increasing the decision authority and operational independence of individual schools as subunits within a district organization. Issues related to organizational subunit

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[1] I. Carl Candoli et al., School Business Administration, 2nd ed. (Boston: Allyn and Bacon, Inc., 1978), p. 43.

autonomy can be examined within the theoretical framework provided by James Thompson.[1] According to Thompson, organizations must seek determinateness and certainty within the uncertainty and indeterminateness of an open system.[2] The environment and technologies of the organization are the major sources of uncertainty.[3] Technological uncertainty gives rise to a need for coordination, i.e., technical rationality, while environmental uncertainty necessitates adaptation in terms of boundary unit buffering, leveling, and forecasting, i.e., organizational rationality. Demands upon the organization may be viewed as potentially competing in that the organization's structure "must reflect interdependence of the organization and its environment, as well as its technology."[4] An organization, as conceptualized by Thompson, possesses a finite "capacity to adapt and coordinate."[5]

Advocates of school decentralization have emphasized the dynamic characteristics of the school environment and the heterogeneity of individual student backgrounds, learning styles, and educational needs as well as the overall social and economic diversity of local populations and school communities. Duncan has pointed out that unless an organization can sense changes in the environment it cannot remain viable.[6] Given the environmental diversity and variability emphasized

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[1]Thompson.

[2]Ibid., p. 10.

[3]Ibid., p. 13.

[4]Ibid., p. 65.

[5]Ibid., pp. 76-77.

[6]Robert B. Duncan, Adaptation to a Changing Environment by Modifications in Organizational Decision Unit Structure (Bethesda, MD: ERIC Document Reproduction Service, ED 062 710, 1971), p. 1.

by advocates of decentralization, two of Thompson's propositions would appear to explain and support moves toward increased autonomy for local school sites:

> Proposition 6.1: Under norms of rationality, organizations facing heterogeneous task environments seek to identify homogeneous segments and establish structural units to deal with each.[1]
>
> Proposition 6.2: When the range of task environment variations is large or unpredictable, the responsible component must achieve the necessary adaptation by monitoring that environment and planning responses and this calls for localized units.[2]

Similar hypotheses have been presented by other writers. Lawrence and Lorsch made the point that organizations or organizational units operating in dynamic environmental conditions tend to be decentralized, while those facing stable environments were relatively centralized.[3] According to Becker and Gordon "decentralization arises as a function of the complexity of the organization's interaction with its external environment and the rapidity with which the organization must respond to the environment."[4] Yet monitoring and adapting to environmental variations is only partially sufficient to the attainment of rationality. The organization's need for coordination must also be recognized. Greater ability to adapt may result from increased autonomy of subunits, but as Bidwell has noted, "the autonomy of these

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[1]Thompson, p. 70.

[2]Ibid., p. 72.

[3]Paul R. Lawrence and Jay W. Lorsch, Organization and Environment (Boston: Harvard University, 1967).

[4]Becker and Gordon, p. 339.

subunits is the chief structural source of difficulties of coordination."[1] Therefore, proposals for increasing environmental sensitivity, responsiveness, and adaptability through decentralization should not be considered independent of their implications for the overall demands of organizational structure, coordination, control, and reduction of uncertainty.

Unresolved Issues

The central point to be derived from the preceeding theoretical analysis of subunit autonomy is the necessity of addressing and balancing the competing demands that adaptation and coordination needs place upon an organization. A clear view of the relative importance of adaptation or coordination for a given organization or class of organizations would appear to be a necessary prerequisite to accurate prediction of the effects of decentralization for that organization or organizational class. Unresolved issues with regard to the appropriate description of the structure of educational organizations, the nature of existing relationships between schools and their environments, and the extent or direction of relationships between decentralization and other aspects of the organizational control structure make judgments concerning the relative need of school organizations for adaptation or coordination quite precarious. Under such circumstances, there would appear to be substantial reason for uncertainty concerning the extent to which increased school site autonomy might be depended upon to accomplish its stated purpose, such as enhancing the efficiency and

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[1]Charles E. Bidwell, "The School as a Formal Organization," in Handbook of Organizations, ed. James G. March (Chicago: Rand McNally and Company, 1965), p. 1013.

effectiveness of schools.

Structure of educational organizations

If organizations must meet competing demands for both coordination and adaptability, it would appear that a firm understanding of the sufficiency of existing mechanisms of coordination and control would be necessary before predicting advantages to be gained by increased adaptability, yet the appropriate description of the structure of educational organizations is an unresolved issue in the organizational and educational literature. Schools are commonly described as unresponsive and authoritarian bureaucracies which are plagued by excessive centralization of decision making and inordinately powerful hierarchical control structures. On the other hand, Lortie has identified the "chain of command" in schools as being relatively weak;[1] Bidwell has written that schools have only "rudimentary forms" of bureaucratic elements;[2] and Weick has described educational organizations as being "loosely coupled."[3] Meyer and Rowan define "loosely coupled" to mean that "structure is disconnected from technical work activity, and activity is disconnected from its effects." According to these authors:

> There is a great deal of evidence that educational organizations (at least in the United States) lack close internal coordination, especially of the content and methods of what is presumably their main activity--instruction. Instruction tends to be removed from

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[1]Dan C. Lortie, "The Balance of Control and Autonomy in Elementary School Teaching," in Educational Organization and Administration, ed. Donald A. Erickson (Berkeley, CA: McCutchan Publishing Corp., 1977), p. 341.

[2]Bidwell, p. 976.

[3]Karl E. Weick, "Educational Organizations as Loosely Coupled Systems," Administrative Science Quarterly 21 (March 1976):1-19.

> the control of the organizational structure, in both its bureaucratic and its collegial aspects.[1]

If as some advocates of decentralization propose, heirarchical controls are to be replaced by increased unit autonomy and schools are in fact already loosely coupled organizations characterized by lack of coordination, the move toward increased site autonomy could be expected to exacerbate rather than correct existing organizational deficiencies. Greater adaptability at the expense of already lacking coordination would be counter-productive. On the other hand, Pierce has identified the loosely structured nature of educational organizations as a reason to support, rather than to challenge, moves toward increased school site autonomy. It is his opinion that "school-based management is not only a practical way to administer schools, but may be the only way," given their loosely coupled structure.[2] Even among advocates of decentralization, one can find little agreement concerning the appropriate description of the structure of educational organizations.

School/environment

A second unresolved issue is the degree to which educational organizations are presently sensitive and adaptable to their environments. Boyd identifies two divergent perspectives concerning the general relationship between the public and its schools and school personnel. The dominant argument is that schools enjoy "substantial

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[1]John W. Meyer and Brian Rowan, "The Structure of Educational Organizations," in Environments and Organizations, ed. Marshall W. Meyer and Associates (San Francisco: Jossey-Bass Publishers, 1978), p. 79.

[2]Pierce, Decentralization, p. 11.

insulation from public opinion and accountability."[1] Those who dissent from this argument commonly maintain that:

> far from dominating the local educational policy making process, educators are more likely to be seen struggling with a variety of interest groups and forces that not infrequently threatens to neutralize their ability to provide any kind of effective leadership.[2]

According to Bidwell, "the teaching profession lacks a clearly defined, stable technology, and professional procedures in education inevitably enter the public domain."[3] If the boundary between the educational process and the environment of the school is in fact excessively permeable, then efforts to increase responsiveness and adaptability would have the effect of allowing even greater uncertainty into the technical core of the organization, thereby presenting even greater challenges to coordination and control demands.

Organizational control

In his discussion of schools as formal organizations, Bidwell has pointed out that control is a "central organizational process."[4] Various aspects, types, and categories of organizational control have been identified in the literature. The dimension of centralization or decentralization is recognized as an important aspect of the overall structure of control. What is yet largely unresolved is the extent or direction of relationships between the centralization/decentralization

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[1]William L. Boyd, "The Public, The Professionals, and Educational Policy Making: Who Governs?" Teachers College Record 77 (May 1976):540.

[2]Ibid.

[3]Bidwell, p. 1017.

[4]Ibid., p. 1014.

dimension and other aspects of organizational control.

A particularly important area of conflicting research findings involves the relationship of decentralization to another dimension which includes standardization and formalization and which Pugh et al have called "structuring of activities."[1] Hage and Aiken[2] and Holdaway and his associates[3] reported standardization and formalization as being positively related to centralization and negatively related to decentralization. The Aston researchers concluded that the degree of centralization varied independently of standardization and formalization.[4] A third group of studies, including the work of Child,[5] has supported the conclusion that formalization and standardization relate negatively to centralization and positively to decentralization. The extent and methods of organizational control are important issues for schools. Despite the position one may take concerning such issues, uncertainty with regard to the control implication of decentralization is a point to be considered.

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[1]D. S. Pugh et al., "Dimensions of Organizational Structure," Administrative Science Quarterly 13 (June 1968), pp. 85-86.

[2]Jerald Hage and Michael Aiken, "Relationship of Centralization to Other Structural Properties," Administrative Science Quarterly 12 (June 1967):72-92.

[3]Edward A. Holdaway et al., "Dimensions of Organizations in Complex Societies: The Educational Sector," Administrative Science Quarterly 20 (March 1975):37-58.

[4]Pugh et al., "Dimensions."

[5]See Child, "Strategies of Control"; John Child, "Organization Structure and Strategies of Control: A Replication of the Aston Study," Administrative Science Quarterly 17 (June 1972):163-177.

Efficiency and effectiveness

The critical question to be asked concerning any recommendation for organizational change is what impact will the proposed change be expected to have on the efficiency and effectiveness of the organization. This issue remains substantially unresolved with regard to increases in school site autonomy. Stevens has argued that process reforms, reforms related to educational decision making, "should not be expected of themselves to inject new efficiency or effectiveness in the schools . . . so much as they should be expected to change the power relations of people concerned with schooling."[1] Proponents of school-based management, school-site management, and other organizational plans that emphasize the autonomy of individual local schools have often identified improved efficiency and/or effectiveness as benefits to be derived from such plans. Whether the anticipated benefits have been or will be the actual results is yet to be empirically documented.

Research

Resolution of theoretical and substantive issues regarding school site autonomy demands a body of empirically verified knowledge concerning variations in site autonomy and the relationship of such variations to other relevant school variables. Empirical research which has addressed site autonomy is, like research related to school decentralization generally, very limited. The literature of education provides extensive documentation of the historical and political significance of past and present decentralization controversies but it

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[1]Leonard B. Stevens, "The Paradox of School Reform," Phi Delta Kappan 57 (February 1976:273-274.

provides very little in the way of solid research findings concerning organizational or educational results of decentralization. There is little that can be used, directly or indirectly, as evidence to support the policies or practices of site autonomy. O'Shea,[1] Ornstein,[2] and Felser[3] have each identified the normative rather than empirical nature of most writings concerning decentralization. According to Clark:

> What a considerable portion of the literature on decentralization to date amounts to is special pleading for a particular solution. Almost never can one point to a balanced consideration of the negative as well as positive consequences of altering the size of units at which decisions are taken. Very little attempt is made to develop ideas coherent enough to warrant the term 'theory' and the casual use of favorable examples seldom justifies the label of empirical research.[4]

With specific reference to school site autonomy plans, Marschak and Thomason discussed the lack of and need for empirical investigation of the actual rather than the assumed effects of school district decentralization.[5] Patterson and Hansen observed that "the placement of decision-making authority as close to the point of implementation as possible" was a concept that was growing in popularity. They also noted that "with this popularity, however, exists a paucity of research that documents its successful implementation."[6] As part of his report

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[1]David W. O'Shea, "Social Science and School Decentralization," in Indeterminacy of Education, ed. John E. McDermott (Berkeley, CA: McCutchan Publishing Corp., 1976).

[2]Allan C. Ornstein, Daniel U. Levine, and Doxey A. Wilkerson, Reforming Metropolitan Schools (Pacific Palisades, CA: Goodyear Publishing Co., Inc., 1975), p. 150.

[3]James W. Felser, "Approaches to the Understanding of Decentralization," Journal of Politics 27 (August 1965):538.

[4]Terry N. Clark, "On Decentralization," Polity 2 (Summer 1970): 509.

[5]Marschak and Thomason, pp. 1-5. [6]Patterson and Hansen, p. 126.

on decentralized school site budgeting, a central element of site autonomy, Seward commented that "practitioners are moving ahead with decentralization schemes but they are quick to agree that they need more research findings to guide their efforts."[1]

Summary of the Rationale

School district organizational plans that include increased school site autonomy as a central feature have been proposed as a means of improving the organizational effectiveness of schools. A theoretical analysis of the autonomy of organizational subunits pointed to the necessity of balancing competing demands for adaption and coordination. Unresolved issues with regard to the appropriate description of the structure of educational organizations, the nature of existing relationships between schools and their environments, and the extent and direction of relationships between decentralization and other aspects of organizational control create reasons for uncertainty concerning the relative need of school organizations for adaptation or coordination.

Research of the organizational and educational implications of increased site autonomy has been insufficient to provide a body of empirically verified knowledge to support judgments concerning the appropriate level of autonomy for school sites. Additional research is needed to investigate variations in site autonomy and the relationship of such variations to other school variables. Such research may be expected to be facilitated by examination of and attempts to revolve significant methodological issues related to the concept of school site

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[1]Seward, p. 8.

autonomy and its measurement. The exploratory questions investigated by this study have been derived from a number of such methodological issues.

Exploratory Questions

The following exploratory questions guide this study:

1. Do school principals report different levels of site autonomy and, if so, for which decisions are differences reported?

2. Do districts (i.e., principals from the same districts) report different levels of site autonomy and, if so, for which decisions are differences reported?

3. Are there identifiable clusters of decisions based upon variations in levels of site autonomy and are any such clusters congruent with areas of administrative responsibility?

4. Does the degree of consensus within districts justify consideration of school site autonomy as a district characteristic?

5. Is the degree of consensus among elementary principals or secondary principals within districts greater than the degree of consensus among principals within districts as a whole?

6. Are there differences among school districts in the overall levels of site autonomy or the average degrees of consensus about autonomy reported by principals?

7. Do principals from districts which have claimed to be decentralized report higher levels of school site autonomy than principals from districts generally?

Extent of Variation

Questions 1 and 2 address the issue of the extent of variation in site autonomy that is to be accounted for with respect to various decisions or types of decisions. The range actual variations in autonomy cover for different decisions or categories of decisions has not been well documented. Discussions of administrative decentralization found in the literature indicate a number of areas of decision making that should be delegated to the building level. Examples of

specific types of decisions made at the site level in certain districts have also been reported. Studies of the distribution of decision authority within school districts generally provide some basis for making assumptions about the decisions concerning which school sites have varying degrees of authority. If the determinants, correlates, and/or effects of varying levels of site autonomy are to be investigated, there remains a specific need for empirically documented knowledge concerning the range and areas of variations in school site autonomy that are to be accounted for in such research.

Dimensionality

Question 3 addresses the issue of the dimensionality of variations in school site autonomy. The distribution of decision authority within school districts has generally been studied on an item by item basis; as a unitary concept; or based upon a priori categorizations of decisions into areas such as business management, curriculum, personnel, etc. An item by item treatment assumes that authority varies independently from decision to decision or that variation is not in terms of clusters of decisions, categories of responsibility, or any other type of underlying dimensions. Consideration of the distribution of decision authority as a unitary concept assumes that authority varies uniformly across decisions, i.e., authority is unidimensional. The use of a priori categories assumes that variations in decision authority are consistent within areas of administrative responsibility and that differences or dimensions of variation are in terms of or congruent with the categories employed.

Whether decision authority within school districts varies in a consistent manner for different decisions or types of decisions has not

often been addressed in educational research. That the extent of decentralization of authority or the level of subunit autonomy does not in fact vary unidimensionally has been suggested by a number of organizational researchers.[1] There is reason to anticipate that actual variations in levels of school site autonomy are multidimensional rather than unidimensional and future research needs to recognize any such dimensions. Whether these dimensions are congruent with areas of administrative responsibility or the types of a priori categories commonly used to classify school decisions should be determined empirically and not merely assumed.

Consistency

Questions 4 and 5 address the issue of the unit of analysis of which school site autonomy may most appropriately be considered a characteristic. The concept has been stated in terms of the extent to which a building or site is autonomous within the school district organization. This would seem to point to the individual site as the appropriate unit of analysis. On the other hand, school site autonomy has also been presented as a form of administrative decentralization. The unit of analysis from this perspective would be the district. Whether site autonomy is more appropriately operationalized as a characteristic of the district's structure or as a characteristic of an individual site's relationship to the overall district is more than an

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[1] See Peter M. Blau, "Decentralization in Bureaucracies," in Power in Organizations, ed. Mayer N. Zald (Nashville: Vanderbilt University Press, 1970), p. 156; Royston Greenwood and C. R. Hinings, "Centralization Revisited," Administrative Science Quarterly 21 (March 1976):151-155.

insignificant semantic distinction. It is an essential methodological issue which needs to be resolved if a body of empirically verified knowledge concerning site autonomy is to be developed.

Hannan and Freeman have pointed to the often unrecognized importance of the issue of unit of analysis for organizational research.

> Little attention is paid in the organizational literature to issues concerning proper unit of analysis. In fact, choice of unit is treated so casually as to suggest that it is not an issue. We suspect that the opposite is true--that the choice of unit involves subtle issues that have far-reaching consequences for research activity.[1]

These authors identified five possible levels of organizational analysis, "(1) members, (2) subunits, (3) individual organizations, (4) populations of organizations, and (5) communities of (populations of) organizations."[2] The issue addressed by this research is whether subunit or organization is the more appropriate level at which to consider differences in school site autonomy. The question is whether autonomy is a characteristic unique to a school site or whether it is a characteristic which describes a feature which is common to sites. Resolution of the issue will then be determined on the basis of the presence or absence of consistency or consensus across sites within a district concerning the extent of autonomy. Also to be considered is whether greater consensus or consistency is found across elementary sites or secondary sites within districts than across sites within districts generally.

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[1]Micheal T. Hannan and John H. Freeman, "The Population Ecology of Organizations," in Environments and Organizations, ed. Marshall W. Meyer and Associates (San Francisco: Jossey-Bass Publishers, 1978), p. 136.

[2]Ibid.

Differences in observations made at the subunit level may be attributed to actual differences in situations or to errors in the measurement or perception of situations which are in fact constant across subunits. Roberts, Hulin, and Rousseau have taken exception to assumptions that differences are error that should be averaged out by aggregation of data when homology cannot be assumed for different situations. They have stated that "The product of such an aggregation cannot be interpreted unambiguously as an organizational characteristic."[1] Freeman has pointed out that a given variable may not be "omnipresent across subunits" and that mistakenly treating reported differences in such a variable as random measurement error is one of the problems that aggregation of data can create.[2] Meyer and Rowan have argued that differences among the reports of principals in the school districts they studied should not be treated as unreliability in the data but as genuine differences in the situations and experiences of the principals.[3] James and Jones have pointed to the need for validation on the basis of intraorganizational consensus if subjective measures are to be accumulated as measures of an organizational

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[1]Karlene H. Roberts, Charles L. Hulin, and Denise M. Rousseau, Developing an Interdisciplinary Science of Organizations (San Francisco: Jossey-Bass Publishers, 1978), p. 85.

[2]John H. Freeman, "The Unit of Analysis in Organizational Research," in Environments and Organizations, ed. Marshall W. Meyer and Associates (San Francisco: Jossey-Bass Publishers, 1978), pp. 348-349.

[3]John W. Meyer, et al., "Instructional Dissensus and Institutional Consensus in Schools," in Environments and Organizations, ed. Marshall W. Meyer and Associates (San Francisco: Jossey-Bass Publishers, 1978), pp. 240-241.

variable.[1]

Differentiation

Questions 6 and 7 address the issues of whether the method of identifying differences in levels of school site autonomy employed for this project provides an empirical basis for differentiating among school districts and whether differences identified are consistent with the reputations of districts which have been cited in the literature as being decentralized. The rationale of this study has argued the need for research related to school site autonomy and the value of an effective method of identifying differences in site autonomy as a means of facilitating such research. Whether or not the method developed and applied for this project successfully identifies differences among school districts in terms of the autonomy of their school sites is an underlying methodological issue for this study.

Limitations and Assumptions

A primary limitation of this study is that no effort is made to examine the relationship of variations in school site autonomy to any other variables. The focus of investigation is specifically and entirely on variations in school site autonomy. Explanation of any such variation is left to future research which it is the intent of this study to facilitate.

A second limitation of this study is that information concerning autonomy is gathered only from school principals. The related assumptions are that across school districts, principals are the persons in

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[1]Lawrence R. James and Allen P. Jones, "Organizational Climate: A Review of Theory and Research," Psychological Bulletin 81 (December 1974):1102.

the best organizational position to be informed of the extent to which school sites are autonomous and that recognition by building level personnel, especially the principal, of the possibility of independent, discretionary action is a necessary condition for site autonomy to be operational with respect for a particular decision at a given site.

A third limitation of the study is that the overall concept of school site autonomy is necessarily reduced to the number of specific decision items that could be included in the survey instrument. The related assumption is that items included are plausibly representative of decisions of significance for the operational effectiveness of schools that might be made at the site level.

Any comparative research faces a limitation in the extent to which terms used have a shared definition across individuals and subject groups. It is an assumption of this study that the terms used in the survey instrument have a high degree of meaning and similarity of meaning for principals both within and across districts. Research concerning the organizational structure of school districts is also limited by an absence of total comparability of the ways in which public elementary and secondary education is organized in various states and within states. An assumption of this study is that school districts generally have central governing boards and district administrative components and that educational services are offered to students by teachers at individual school buildings or sites which serve certain grade levels and are administered by persons commonly known as principals. Therefore the major categories used in this research such as district, school, elementary, secondary, teacher, and principal are assumed to be relevant categories for public education throughout the

United States.

A particularly important assumption of this study is that differences in school site autonomy that are reported, whether between individual principals or between districts, are not merely error variance or random measurement error but in fact represent differences in the experience of principals. It is not assumed that difference in autonomy that actually exist are necessarily identified but that differences which are identified represent actual differences.

Significance of the Study

School district organizational plans that include increased autonomy of school sites have been proposed and adopted as means of increasing the adaptability and effectiveness of schools. From the perspective of the practice of school administration there is a need for investigation of the organizational and educational implications of variations in site autonomy. From the perspective of organizational theory, variations in the autonomy of school sites provide an opportunity for cross-sectional and longitudinal investigation of relationships among structural variables that could add to available knowledge in an area of theoretical uncertainty, especially with regard to educational organizations. Whether research concerning school site autonomy is to be carried out to inform policy and practice or to advance theory, such research may be expected to proceed more effectively if based upon empirically derived knowledge of variations in the degree to which school sites operate autonomously. The significance of this research project lies in its attempt to contribute to the existence of such knowledge by developing, applying, and analyzing a method of identifying differences in autonomy.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

The review of related literature in this chapter is presented in three parts. The first part demonstrates the prominence of centralization versus decentralization issues throughout the history of American public education and the ongoing social and political significance of such issues. The second part examines the importance of decentralization as an organizational issue and emphasizes a number of substantial measurement questions which are critical to research of organizational decentralization. In the third part of the chapter, research findings related to school site autonomy as a form of decentralization are reviewed with special attention given to findings concerning extent, dimensions, and consistency of variations in site autonomy.

Historical and Political Significance of Decentralization

> American education after nearly 200 years of history faces many dilemmas, but there is one dilemma which, although apparently not clearly recognized by large sections of American society, or by American educators for that matter, is so profound as to challenge the very social and philosophical bases upon which the public school has been developed.
>
> The dilemma is one of choice between a predominantly centralized or a predominantly decentralized system of public education.[1]

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[1] William G. Walker, Centralization and Decentralization: An International Viewpoint on an American Dilemma A Special Case (Bethesda, MD: ERIC Document Reproduction Service, ED 064 805, 1972), p. 1.

Local District Units

To be fully understood, currently advocated school decentralization proposals must be placed within the larger perspective of the historical and political significance of centralization versus decentralization of the governance and administration of American public education. From an international point of view it would seem curious to consider decentralization of American public education because, by comparison, education in the United States is already very decentralized. In a strictly legal sense there is no national school system. The plenary power for education, by virtue of the Tenth Amendment to the United States Constitution, belongs to the governments of the various states. With the exception of Hawaii, each of the states has seen fit to invest varying amounts of legal authority for educational governance into the hands of elected or appointed boards of local school districts.

> A local school district is the basic governmental unit through which the exercise of local control of schools is effected. It is a unit of government, possessing quasi-corporate powers, created and empowered by state law to administer a public school system. A school district is controlled by a governing board; it has taxing power, the right to make contracts, and the right to sue and be sued.[1]

Knezevich has pointed out that the local school district can be "examined as (1) a political entity, or civil subdivision of the state; (2) a legal entity, or a quasi-municipal corporation; (3) a geographical entity; (4) a social institution; and (5) an educational entity."[2] In many areas of the country the boundaries of the school district are

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[1]Roald F. Campbell et al., The Organization and Control of American Schools, 3rd ed. (Columbus, OH: Charles E. Merrill Publishing Co., 1975), p. 75.

[2]Stephen J. Knezevich, Administration of Public Education, 2nd ed. (New York: Harper & Row, 1969), p. 115.

often coterminous with geographical or political boundaries of cities, towns, or townships. In some states, primarily in the South, the county serves as the basic school administrative unit. In other areas school district boundaries have no visible relationship to any other political or geographic subdivision. School districts also vary with respect to the populations they serve. In some cases elementary and high school districts operate as separate units while other districts are unified and serve students in grades kindergarten thru twelve. It is also common for preschool programs, adult and continuing education, libraries or community colleges to be operated by local school districts. As of 1977 there were 15,834 operating school districts in the United States.[1] Regardless of variations between states or districts in the distribution of authority for education, the governance and administration of public education in the United States by almost 16,000 individual local school districts can only be described as decentralized when compared with national or even provincial systems operating in other Western nations, for example France or Italy.

When the United States Constitution was being written, "the idea that education was a function of the national state obtained in only one major Western country -- the Kingdom of Prussia."[2] It is therefore not surprising that the Constitution should be silent with regard to the nation's schooling. By relinquishing to the several states those powers not specifically designated to the Federal government, the Tenth

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[1]U.S. National Center for Educational Statistics, Education Directory, Public School Systems 1977-78 (Washington, DC: U.S. Government Printing Office, 1978), p. xvi.

[2]Adolphe E. Meyer, An Educational History of the American People (New York: McGraw-Hill Book Co., 1967), p. 121.

Amendment to the Constitution placed in the hands of the states the authority for education. Although there were those who, during the early years of the Republic, did forward plans for a national system of education,[1] the traditions and sentiments for local, private, or sectarian education were dominant. The centralization/decentralization question for the states was often the extent of the authority of individual states over education.

Beginning with the Massachusetts 1647 "Old Deluder Satan Act," it was apparent that legislative attempts to govern local education were at the best to be "granted an imperfect obedience."[2] The 1647 General Court Act was important legislation largely because it "enunciated the principal of state authority in the control of schools."[3] Even though the principle established in Massachusetts was "adopted in all New England and ultimately spread throughout the United States,"[4] the reality of colony wide or state control in any significant measure was to occur much later.

"Developments in Massachusetts beginning with and following the comprehensive law of 1789 furnish an excellent description of patterns which eventually came to characterize the American system of school control."[5] This Massachusetts law recognized the school district form of organization of education. Butts and Cremin point out that the law "reflected the decentralization that had come with continued settlement of rural areas" and "paved the way for the assignment of the tax

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[1]Ibid., p. 125. [2]Ibid., p. 35. [3]Campbell et al., p. 78.

[4]Ibid., pp. 78-79.

[5]R. Freeman Butts and Lawrence A. Cremin, A History of Education in American Culture (New York: Holt, Rinehart and Winston, 1958), p. 253.

prerogatives to the district eleven years later."[1] The legal recognition of the district form of organization and the establishment of the district power to tax were essential elements in the historical development of the district as the primary unit of educational governance throughout the United States.

The district form of organization authorized by the 1789 law could be described as a move toward decentralization in that it recognized that the educational needs of the increasingly large numbers moving out over the countryside "could no longer be met by one centrally located town school" and that "some means had to be devised to establish and maintain several schools in different sections of the township."[2] The pattern of centralized town and decentralized district supervision and control presented one of the early centralization/decentralization controversies. Many of the New England states increased the power of the town committees during the first half of the nineteenth century. "In the West the federal land grants to townships for educational purposes made these communities the logical agencies of control. On the other hand, the decentralized neighborhood settlements made districting extremely necessary."[3] In the South the traditional county unit of government was adopted as the appropriate unit for school control and in the middle states the pattern varied. The geographic unit that comprised the school district may have been a town, a township, a subsection of a township, or a county, but the general pattern of local, legally recognized school districts became the prevalent organizational unit for public education in the states and territories.

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[1]Ibid., p. 246. [2]Ibid., p. 253. [3]Ibid., p. 255.

The basic local, decentralized pattern of school organization became firmly established. The "town" system gained strength compared to the smaller "district" unit. Yet it has been pointed out that "the problem of centralization versus decentralization in school administration was by no means solved by strengthening town as opposed to district control."[1] The development of local authority in educational decision making was in some respects at the expense of the power of the state. "One of the great battles of this period was the one in which the state tried to regain this power and authority in the interest of raising standards and equalizing opportunity."[2] According to Butts and Cremin, "The years between 1779 and 1865 mark the era when the great state school systems of contemporary America took form."[3]

Cubberly has identified three component steps in the development of state supervision of education. The first step was "the establishment of some form of state aid." The second was "the imposing of conditions necessary to secure this aid." The third was the election or appointment of "some officer to represent the state and enforce the observance of its demands."[4] Butts and Cremin point out that both the state superintendency of education and the state board of education were important patterns of strengthening state educational authority.[5]

In 1812 New York was the first state to create the office of State Superintendent of Common Schools. "It was to be the duty of this officer to look after the establishment and maintenance of the schools

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[1]Ibid. [2]Ibid. [3]Ibid., p. 241.

[4]Ellwood P. Cubberly, The History of Education (Cambridge, MA: The Riverside Press, 1940), p. 687.

[5]Butts and Cremin, p. 255.

throughout the state."[1] By 1861 nineteen of the then 34 states had either ex officio or regular state school officers. In 1937 the first State Board of Education in the United States was established in Massachusetts and Horace Mann was induced to accept the position of Secretary.[2] The work of Mann in Massachusetts, Henry Barnard in Connecticut and Rhode Island, and tireless officials in various other states contributed greatly to the importance of state government in the development of public education in the United States.

The development of a specific arm of state government to deal with education may certainly be understood as a centralizing influence. Yet educational decision making during the early nineteenth century must still be described as decentralized. The growth of the common school may be considered the primary development of this period, and this phenomenon, Butts and Cremin pointed out, was a local or grass roots development.

> In the decentralized rural neighborhoods which made up most of late eighteenth and early nineteenth century America, the power of the state could be and was kept relatively distant. Had it not been largely the will of the American people to establish schools, it is doubtful that they would have been established. On the other hand, the phenomenal growth of schools in this period is ample testimony that it was the will of the people to do so. It is this fact that is referred to when the growth of the common school is called a grass-roots movement. Tax laws and court records can easily obscure the true picture of a local community setting out to build a school with their own hands, then sharing the cost of employing teachers for their children, and supervising the course of this education. Yet this is the true picture of the growth of the common school.[3]

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[1] Cubberly, History of Education, p. 687.

[2] Ibid., pp. 688-689.

[3] Butts and Cremin, p. 253.

The concepts of centralization or decentralization are meaningful only in a relative sense. Whether decision authority is to reside at the national or state level; the state or local level; or the county, town, or district level are each issues which may be considered as questions of centralization versus decentralization. During the early periods of American educational history, the dominant pattern that developed was state rather than national jurisdiction over education and the state authority was extensively delegated to a multitude of local district units. These units may have comprised entire counties or they frequently would have served only a small section of a city or township. In summary, the administration and governance of American education had developed as a distinctly decentralized enterprise.

Changing District Characteristics

Despite the basically decentralized nature of the educational services that became characteristic in the United States, the need to decentralize has been a frequently recurring subject in the dialogue of education. This seeming contradiction is explained by the fact that school districts as legal entities and as educational organizations, in many cases, came to be something quite different from the very small, localized units that had become dominant by the early nineteenth century. Important changes or trends can be identified that resulted in greater centralization within education. The first of these were the demographic changes brought about by tremendous increases in population due largely to massive immigration and resulting in the rapid growth of American cities as well as the expansion of settlements to the West. A second type of change was the steady and often bitterly opposed movement toward consolidation or unification of school

into larger units in both rural and urban areas. A third set of changes were the programs of "reform" of school governance and administration that began in the later portions of the nineteenth century and continued on well into the twentieth century, primarily in the cities.

Demographic changes

A highly decentralized system of thousands of small local school districts had developed as a means of providing some degree of education to a limited and dispersed population as it spread over a vast new land. Many identifying characteristics of the local school district system would remain for decades, but the demographic features which had been the basis for the district system's development were to change greatly as the nineteenth century progressed. These changes would continue to be visible well into the later half of the twentieth century. As the data in Table 2.1 illustrates, the size of the population, therefore the number of children needing an education, grew at a rapid pace; the density of the population increased even as the area of the nation expanded; and many large cities developed in a land that had been almost entirely rural. There were more people to serve and an increasing percentage of these people were no longer spread over vast areas but were massed together in rapidly expanding cities. The local district system was severely challenged by the mere weight of the numbers as well as by the diversity of the school aged population.

Consolidation

The local district system of educational organization came under increasing attack both inside and outside the cities. The system allowed for obvious deficiencies and inequalities which stimulated

Table 2.1.--Changes in the size, density, and urban percentage of the United States population and the number of large cities 1820-1960

Year	National Population	Population Per Square Mile	Percent Urban	Large Cities (More than 100,000 Pop.)
1820	9,638,453	5.5	7.2	1
1860	31,443,321	16.6	19.8	9
1910	91,972,266	31.0	45.9	50
1960	178,464,236	60.0	69.9	130

SOURCES: U.S. Department of Commerce, Bureau of the Census, Statistical Abstracts of the United States: 1978, 99th Annual Edition (Washington, DC: U.S. Government Printing Office, 1978), pp. 6, 23, 28; David B. Tyack, The One Best System: A History of Urban Education (Cambridge, MA: Harvard University Press, 1974), p. 31; Ellwood P. Cubberly, Public School Administration (Cambridge, MA: The Riverside Press, 1922), p. 88.

considerable movement toward consolidation. "Massachusetts as early as 1869 had passed legislation permitting two districts to consolidate. By 1890 the movement had gained enough force in other states to bring about pressure for similar laws and by 1910 a majority had authorized consolidation."[1] According to Knezevich, the move toward consolidation, which continued well into the later half of this century, was directed toward the "excessive decentralization, which produced almost 200,000 local school districts at one time, most of which were weak and ineffective."[2] By the 1947-48 school year the number of local districts in the United States had been reduced to 94,926 and by 1971-72 there were 16,838 districts operating educational programs.[3] The movement to reduce the number and increase the size of school districts has

[1]Ibid., p. 431. [2]Knezevich, p. 136.

[3]Campbell et al., p. 85.

generally been known as rural consolidation. Cubberly was one of those who championed this movement as a way of dealing with the "rural life problem."[1]

Not all of the consolidation or unification that took place involved rural school districts. Many of the earliest examples of school districts being combined or eliminated took place in the cities. Many of the older cities contained "a number of what were virtually country school districts, each maintaining an ungraded and independent school."[2] "In the early 1890's the city of Philadelphia consisted of over 85 school districts; New York had many more."[3] As the cities grew, it was common for these individual "ward schools" to be brought together under the supervision of a city superintendent. The first city superintendent was appointed in Buffalo, New York in 1837 and directed to supervise the seven independent schools that had been organized.[4] In 1842 the Michigan legislature "abolished the district system in Detroit and provided for the organization of a unified system of schools for the city, under a city board of education."[5] In 1853 Chicago appointed a superintendent to create a unified district from seven previously existing districts.[6] Even though a city wide school system was created, in many cases "ward schools" continued to be identifiable entities

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[1]Ellwood P. Cubberly, Public Education in the United States (Cambridge, MA: The Riverside Press, 1947), p. 720.

[2]Ibid., p. 316.

[3]Ezra I. Staples, ed., Impact of Decentralization on Curriculum (Washington, DC: Association for Supervision and Curriculum Development, 1975), p. 1.

[4]Cubberly, Public Education, p. 317.

[5]Ibid., p. 318. [6]Ibid., pp. 318-319.

because of either the existence of subdistrict boards or the election of members to the central board from each ward. In Philadelphia it was "not until the twentieth century that local wards lost their substantial power."[1] "Until 1911 each of the thirty-nine subdistrict boards in Pittsburgh had individually raised local taxes, chose teachers, built new schools, and maintained old ones--in fact, assumed all responsibility for education except buying textbooks, paying teachers, and running the high schools and the 'colored schools.'"[2]

A rapidly increasing number of students being served by a decreasing number of school districts obviously indicated that the average size of the student population for American school districts was becoming larger. Although the various parts of these new districts may have remained only loosely joined, in many instances the framework for a more centralized pattern of school organization had been established.

Reform

The combined effects of population growth and district consolidation was an increasing number of students being served by a decreasing number of school districts. Within these larger districts another type of change took place that is generally known as the reform movement. Events that took place during the period of reform had a strong centralizing effect upon the way many of the nations larger school districts were controlled and managed. Various authors have presented analyses of the period of the reform of urban education that began during the later nineteen hundreds and continued into the current century.

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[1]David B. Tyack, The One Best System: A History of American Urban Education (Cambridge, MA: Harvard University Press, 1974), p. 37.

[2]Ibid., p. 89.

Historical, social, and educational implications of the reform period have been presented from distinctly varying perspectives and the conclusions reached have been markedly inconsistent.

Butts and Cremin point out that education "quickly became 'big business' following the Civil War,"[1] and commented positively concerning the rise of scientific study of administration and the necessary move toward great efficiency of administration during the early twentieth century in the cities.

> One also notes a number of new administrative forms outstanding among the highly complicated city school systems. Managing as they did huge enterprises involving large staffs and appropriations, these systems encountered many problems that called for more efficient administrative approaches. The effort to solve these problems gave rise to a scientific study of administrative procedures which resulted in considerable crystallizing of desirable methods by the early 1920's. The latter movement did much to stimulate the professional characters of educational work.[2]

Tyack's history of urban education, The One Best System, analyzed the school-community relationship of the nineteenth century rural or village school and used this analysis as a tool for understanding the decentralized pattern of educational decision-making in American cities a century ago. Tyack pointed out the similarity between the transfer of power to professionals that resulted from the process of rural consolidation and the movement to reform the schools for the exploding population of American cities by the search for the "one best system." He presented the type of changes that took place, the various social and political forces working for and against such changes, examples of the process of change in several cities, and an assessment of the results of the reform. He concluded with an examination of what he considers the present crisis in urban education in the light of the

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[1]Butts and Cremin, p. 429. [2]Ibid.

structure, relationships, and ideologies developed over the last century during the pursuit of that "one best system."[1]

Cubberly has presented a most positive view of the old decentralized city schools being "replaced by a large unit and a more rational form of school control."[2] He points toward the "evolution of the professional superintendent and the delegation of administrative functions to experts" and the moves to "reduce the size of the board" as the means by which the board of education may be "a small and businesslike body, transformed into a real board for school control."[3] Cubberly presents data to illustrate that during the 25 year period from 1895 to 1920 the number of seats on boards of education in America's 50 largest cities (populations more than 100,000 in 1910) was reduced from 798 to 406.[4] He also argued the merits of at-large representation rather than ward representation on school boards. One of his positions was that "the inevitable representation from these 'poor wards' is eliminated, and the board as a whole comes to partake of the best characteristics of the city as a whole." Cubberly saw ward representatives as representing a "constituence instead of a cause."[5]

In an extensive analysis of the research concerning the relationship between public and professionals in matters of school governance, Boyd points to an explanation of the ascendancy of the school superintendent during the turn of the century reform movement that "succeeded in transforming not only the governance of American municipalities but

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[1]Tyack. [2]Cubberly, Public Education, p. 323.

[3]Ellwood P. Cubberly, Public School Administration (Cambridge, MA: The Riverside Press, 1922), p. 87.

[4]Ibid., p. 88. [5]Ibid., p. 95.

also that of American school systems."[1] The new model instituted "sought to insulate the schools from the seaminess of politics and to promote efficiency and effectiveness in management through the application of professional administrative expertise."[2] The professionally trained school superintendent was viewed as the person best qualified to make the "essentially technical judgments required to develop a general and efficient educational program" for the whole community.[3] The move to centralize administration and governance can be explained as follows:

> Since, according to this view there was only one legitimate interest, the public interest, it followed that educational programs ought not to be differentiated according to the parochial and hence illegitimate desires of various classes, ethnic groups, and sub-communities.[4]

Lyke has identified three main points used by those arguing for reform through centralization. The first argument was that local school boards, as opposed to central city boards were often corrupt and need to be removed from the partisan machine politics of the wards. The second argument was that good administrative practices required centralization. Inequities were to be reduced and rational and uniform policies for revenue, budget, and curriculum could be introduced. The third was that centralization could modernize education. Only centralized boards could meet the demands of the increasing population and provide the needed high schools and vocational training. In addition centralized boards could hire the skilled administrators that were

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[1]Boyd, p. 543. [2]Ibid. [3]Ibid., pp. 543-544.

[4]Ibid., p. 543.

necessary to operate a modern school.[1]

Roper has presented an article which portrays consolidation and centralization of power, along with compulsory attendance, as weapons used by the schools against their natural enemy, parents.[2] He writes of the "Mass immigration between 1880 and 1930" as providing "one of the excuses for urban public schools to merge small local districts into large central districts" and of the "collection of administrative control in the hands of a central superintendent," as the "Emergence of the Grand High Anti-Parent."[3]

Katz examined the historical development of urban school centralization and administrative bureaucracy by means of a case study examination of the Boston schools during the middle and later decades of the nineteenth century.[4] The central effort of the book was to "demonstrate a connection between bureaucracy and social class"[5] by means of historical analysis of the events occurring during the period of reform of urban education with particular attention to what Michaelson has described as "the elaboration of the mechanisms of control of the lower orders by the dominant middle class seeking to maintain its privileges

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[1]Robert F. Lyke, "Political Issues in School Decentralization," in The Politics of Education at the Local, State and Federal Levels, ed. Michael W. Kirst (Berkeley, CA: McCutchan Publishing Corp., 1970), pp. 113-114.

[2]Dwight Roper, "Parents as the Natural Enemy of the School System," Phi Delta Kappan 59 (December 1977):239-242.

[3]Ibid., p. 241.

[4]Michael B. Katz, Class Bureaucracy and Schools: The Illusion of Educational Change in America (New York: Praeger Publishers, 1971).

[5]Ibid., p. 6.

for its children."[1]

As part of their effort to develop a Marxist perspective concerning the "correspondence between the social organization of schooling and that of work,"[2] Bowles and Gintis point to the class politics of the urban school reform movement.

> The urban school reform movement was an integral part of the broader municipal reform movement, aimed at reducing the political power of the "ethnic enclaves" of the urban working class and small property owners. Under the banner of honesty and good government, small groups of big businessmen, newspaper editors, and professionals in city after city succeeded in altering the structure of urban government.[3]

They go on to state that "Nowhere was the elite nature of the municipal reform movement more evident than in the struggle for the schools."[4]

In her review of revisionist historical works of a number of authors, including Katz and Bowles and Gintis, Ravitch has pointed out that an analysis of the centralization of city schools, New York in particular, that narrows in on the "social class of the centralizers" fails to recognize "the sorry state of the schools before centralization." Ravitch points to "the overcrowding, the physical deterioration of buildings, the lockstep instruction, the favoritism in hiring, and the iron grip of a meritless seniority system." Also cited were the program improvements that were initiated after centralization, such as "classes for the physically handicapped, blind, deaf, tubercular, and anemic; evening recreation centers for teenagers; evening concerts,

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[1]Jacob B. Michaelsen, "Revision, Bureaucracy, and School Reform: A Critique of Katz," School Review 85 (February 1977):229-246.

[2]Samuel Bowles and Herbert Gintis, Schooling in Capitalist America (New York: Basic Books, Inc., 1976), p. 151.

[3]Ibid., p. 187. [4]Ibid.

vacation schools, and playgrounds; medical inspections; high schools; special classes for non-English speaking children and adults; evening lectures for adults; school libraries."[1] The fact that within three years the central board was taken over by Tammany appointees is used by Ravitch to argue that "Instead of giving power over minorities to upper-class nativists, centralization may actually have hastened the dominance of Irish Catholics in New York City public Schools."[2]

The increasing power of the professionals or the increasingly professional character of educational work was the general historical trend which Zeigler, Tucker, and Wilson portray in their article, "How School Control Was Wrested from the People."[3] These authors identify several phases in the "process of parental political disenfranchisement." The second phase was identified as control by local professionals, was characterized by "reform and efficiency," and was described as including the period from 1900 to about 1968.[4]

Callahan's Education and the Cult of Efficiency discussed the adoption of business values and practices by school administrators, during the period from 1900 to 1930. Callahan traces the fascination with the goal of efficiency to the scientific management concepts and efficiency expert activities so prevalent in the business world of that day and to the vulnerability of the school administrator to the demands

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[1]Diane Ravitch, "The Revisionists Revised: Studies in the Historiography of American Education," Proceedings of the National Academy of Education, vol 4 (1977), p. 18.

[2]Ibid.

[3]L. Harmon Zeigler, Harvey J. Tucker, and L. A. Wilson, "How School Control Was Wrested from the People," Phi Delta Kappan 58 (March 1977):534-537.

[4]Ibid., p. 534.

that schools become efficient regardless of the questionable appropriateness of many such mechanistic standards to the educational enterprise. The ongoing significance of the efficiency tradition among educational administrators is demonstrated especially with regard to the operation of city school districts. The relationship between the "cult of efficiency" and the overall pattern of the "reform" of city school district administration and governance is made clearly apparent.[1]

The preceding paragraphs have pointed out the variety of ways in which the urban school reform movement has been understood and characterized. It has not been the purpose here to attempt to resolve or to contribute to the historical controversy of the reform period, but rather merely to demonstrate the prominence of issues related to centralization during this period of time. The urban school reform movement was characterized by a number of interrelated changes that were adopted at varying times, in varying degrees by the growing cities of the United States. The following are some of the commonly cited features of the reform movement:

1. The centralization of the city school districts that had begun with the creation of central boards over or replacing individual ward or district boards was continued by the reduction in the number of board members who were elected at-large rather than by specific wards.

2. The separation of educational government from municipal government by use of a non-partisan ballot and elections held separable from municipal and state elections.

3. The ascendancy of the role of the superintendent as a professionally trained educational expert to preside over the school district. This expansion of the control function of the superintendent was necessarily accompanied by a contraction of the role of the lay representatives, the board of education.

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[1] Raymond E. Callahan, Education and the Cult of Efficiency (Chicago: The University of Chicago Press, 1962).

4. The development of greater specialization and bureaucratic order within the school system.

5. The selection and promotion of teachers according to a strict merit system rather than patronage and favoritism.

6. An increased concern for efficiency often accompanied by a "business" model of operation.

In general the direction of this period was a movement away from a diffuse model of governance by political forum to a centrally administered district governed by a board of education operating as a corporate board.

Centralization Trends

Movements toward greater centralization have continued into the second half of the twentieth century and have not been merely within school districts. Centralization during recent decades has been identified as a shift of educational decision making toward state and national authorities as well as continued concentration of authority within school districts. A significant force for centralization has been described by Kirst as "an explosion of federal, state, and judicial regulation of local education decisions."[1] Van Geel dealt extensively with the nature of these changes especially as they apply to the control of curriculum policy. He points out that:

> There are now more stages in the decision-making process at which proposals can be vetoed, and there is a more elaborate appeals system which can be used to seek review of decisions made by one of the participants in the decision process. For example, many decisions made at the local level can now be appealed not only to state agencies but also to a federal agency and the courts. A complex hierarchy of authority has thus emerged, involving the three levels of government (federal, state, and local) and the

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[1] Kirst, p. 1.

> three branches of government (legislative, executive, and judicial). Complex procedures have emerged for meshing these parts of the government.[1]

Even though state legislatures have always held the ultimate constitutional authority to control educational programs, until recent years "these legislature generally acted with restraint in exercising their own authority."[2] Courts traditionally had been hesitant to replace the judgment of local school officials with judicial judgment. Restraint by governmental agencies, legislative bodies, and the courts on both the state and federal levels has been less apparent in recent years.

Wise points out that, "With each state, federal, or court policy, decision-making at the local level is reduced."[3] He attributes part of this increased involvement of agencies external to the local school to the dynamics of the more frequent use of the appeal process.

> One of the results of the phenomenon of appeal to external authorities for the resolution of institutional problems is the drift to centralization. An external authority cannot generally make policy for a single institution. When an external authority responds to a problem, it makes policy for all similar institutions within its jurisdiction. When a state authority attempts to solve an educational problem, it imposes a solution on all schools in the state. When the federal government attempts to solve an educational problem, it imposes the solution on all schools in the nation.[4]

The efforts of state and federal authorities to deal with "the perceived failure of school officials to solve important educational and social problems" has resulted in "the diminution of local discretionary authority" and "the increasing centralization of educational policy

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[1]Tyll Van Geel, Authority to Control the School Program (Lexington, MA: Lexington Books, 1976), p. 3.

[2]Ibid., p. 1

[3]Arthur E. Wise, "The Hyper-Rationalization of American Education," Educational Leadership 35 (February 1978):354.

[4]Ibid.

making." Wise envisions the development of an "unplanned de facto national system of education."[1]

Lyke has pointed out significant moves toward greater centralization in the early 1950's, the late 1950's, and during the early 1960's. During the McCarthy era teachers and school programs were subject to attack as being subversive. During the later 1950's, "urban educators were caught between civil rights groups and white segregationists." According to Lyke, the reaction of educators to the buffeting they received from the various groups was to limit community involvement and to seek "refuge behind centralized administrative structures that could guarantee them autonomy."[2]

During the early years of the 1960's urban school districts were forced to recognize that significant segments of their clientele, especially disadvantaged and minority students, were "not learning and were not getting jobs upon graduation." Disparities in facilities and the quality of teaching had the effect of "perpetuating unequal treatment." Integration, the apparent solution to the disparities, was promised but occurred only slowly, if at all. Lyke points out that, "The primary response to these problems in the early 1960's was, interestingly enough, more centralization."[3] The failure of the schools was attributed to "entrenched teachers and administrators" who were prepared only to teach effectively white middle-class children. The solution sought was to add new teachers, new programs, and more money. Superintendents of schools were to have "more authority and resources to force changes through the recalcitrant principals and teachers . . .

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[1]Ibid., p. 355. [2]Lyke, p. 116. [3]Ibid.

Further centralization under the right administrative leadership was said to be the answer."[1]

"Reformed centralization" was not the answer to the problems of the urban schools. Even when superintendents were "reform-oriented" they often "could not institute change." According to Lyke, "superintendents simply lacked the political and administrative resources to bring about reform."[2] The infusion of new dollars was similarly not sufficient to bring about the changes desired. The advocates of centralized reforms were soon to become overtaken by those proposing or demanding decentralization.

Decade of Decentralization

During the late 1960's and early 1970's the ongoing centralization/decentralization debate was dominated by a concern for the decentralization of America's urban school districts. The proposals for decentralization were often combined with demands for "community control." According to Fantini and Gittell:

> Recognition of a constantly declining education quality and lack of success in achieving integration led to the emergence of the decentralization-community control concept as a new thrust of achieving substantive changes in education. It was predicated on the realization that the political environment of school decision-making was the determinant of quality education. So long as the schools in the ghetto were controlled by those removed from the needs of the children (and often by those who viewed these children as uneducable), quality education would not, or could not be achieved.[3]

The urban school decentralization controversies had many dimensions and occurred on various fronts. A massive body of literature

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[1]Ibid., pp. 116-117. [2]Ibid., p. 117.

[3]Mario Fantini and Marilyn Gittell, Decentralization: Achieving Reform (New York: Praeger Publishers, 1973), p. 44.

exists related to the events of this period. Numerous authors have explored the decentralization movement from a variety of perspectives and have, not suprisingly, reached quite divergent conclusions.

LaNoue and Smith have presented an analysis of urban school decentralization, especially its political basis and implication. They have identified two different sources of argument for decentralization. The first source was "specialists in public school administration who have long recognized the dysfunctional consequence of large educational systems."[1] They cite Mort and his associates for an early interest in the relationship between decentralization of schools and the adaptability of schools to local communities. During the 1960's there were studies of delegation of administrative authority in cities such as New York, Chicago, and Philadelphia that found that "decentralization would be beneficial" based upon concepts of "efficiency, innovation, or accountability."[2]

The second source of arguments for decentralization is described as "a political alliance of minority groups and white liberals."[3] The arguments of these groups were not based upon the benefits of the delegation of administrative authority but rather on the needs of the minority community for control of their schools. LaNoue and Smith present four hypotheses as representing the logical structure of the argument for school decentralization:

1. Decentralization will permit more people to participate in educational decision-making than will other forms of school system governance.

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[1]George R. LaNoue and Bruce L. R. Smith, The Politics of School Decentralization (Lexington, MA: Lexington Books, 1973), p. 15

[2]Ibid., p. 16. [3]Ibid., p. 15.

2. This participation will increase the influence of minority groups in the system as a whole; and in the neighborhoods where minority groups are a majority, they will control the schools.

3. This realignment of political power through decentralization will lead to more (a) relevant curricula, (b) professional accountability, (c) minority group role models and (d) assurance among students that they can control their own fate - all of which will result in better education than comes from centralized systems with their characteristics of economy of scale, merit standards, and specialized schools.

4. By improving the education of minority groups, decentralization will in the long run outdo centralization in providing such groups better access to jobs and social benefits and in hastening their integration into a wider society.[1]

They also point out that some advocates of decentralization and community control rejected the "white middle-class character of the socialization process" and hoped to "use the schools to encourage ethnic solidarity and challenge the traditional American myths."[2]

The extent to which decentralization was an organizational and political force in America's larger school districts during the late 1960's and early 1970's has been reported by Ornstein, Levine, and Wilkerson. The data presented was based upon surveys of 69 school systems with 50,000 or more students between 1970 and 1974. Of these 69 districts, 50 report that they either had or were considering decentralizing. In most cases the move toward decentralization occurred after 1967. The decentralized units were organized on a variety of bases and were known by a number of different names, most frequently as districts or areas. In several cases the decentralized units were further subdivided.[3]

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[1]Ibid., pp. 18-19. [2]Ibid., p. 19.

[3]Ornstein, Levine, and Wilkerson, pp. 125-128.

Only two districts, New York and Detroit, reported adoption of plans for community control as well as administrative decentralization by the establishment of legal provisions for the election of local boards at the unit level. More frequently some type of advisory parent or community group functioned at the school or subunit level. Ornstein, Levine, and Wilkerson conclude that, "For the most part, the officials running the schools have managed to maintain control."[1]

Based upon the survey data gathered, the following major purposes for administrative decentralization were identified:

1. To reduce administrative span of control
2. To provide greater staff sensitivity to local populations
3. To enhance school community relations
4. To provide greater articulation and continuity in the K-12 programs
5. To provide more efficient maintenance and supply support of the school unit
6. To reduce bureaucratic overlap and waste[2]

Ornstein and his colleagues join other writers who have pointed to the insufficiency of empirical data to support the claims made for decentralization.

> Oddly enough sufficient evidence was not found to support any generalizations about administrative decentralization and any concurrent plans for community involvement. The reasons tended to be based on intuition and logic, on polemics from the literature, and possibly on unstated reasons such as the pressure to reform the system. Very few of the school systems indicated that an evaluation procedure for their new organizational models had been implemented, and very few point out the need for pilot testing some of the related assumptions, goals, and recommendations.[3]

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[1] Ibid., p. 129. [2] Ibid. [3] Ibid.

Current Decentralization Proposals

The urban school decentralization-community control demands of the late 1960's and early 1970's were primarily a function of intense political struggles in America's largest cities. School-site management decentralization plans have most frequently been adopted by moderate sized[1] and suburban districts.[2] Although demands for community control and the adoption of regional or area subdistrict administrative units may accurately be understood as stimulating moves toward site level management plans in moderate sized districts, the two movements must be viewed quite differently. Referring to the adoption of site management plans, Marschak and Thomason have commented that "The decentralization movement in these districts is not a search for political peace, as in the urban case, but rather a search for a better use of a district's administrative resources."[3] The motivation to adopt site management plans may not be as apolitical as Marschak and Thomason have suggested, but it is true that the enhancement of school productivity is the primary benefit claimed for such plans, not political peace.[4]

Administrative/Political Decentralization

The preceding sections have attempted to demonstrate the continued significance of centralization/decentralization issues in the history of American public education. Within this discussion two

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[1]Marschak and Thomason, p. 3.

[2]Patricia A. Craig, "Determinants and Effects of School-Site Management Reform in California Public Schools," paper presented at the annual meeting of the American Political Science Association, Chicago, IL, 29 August 1974.

[3]Marschak and Thomason, p. 4.

[4]Guthrie, p. 279.

related but conceptually different forms or aspects of decentralization have been present, administrative decentralization and political decentralization. Although somewhat different terminology and categories have been proposed by various writers, the essential distinction between administrative and political decentralization is identifiable throughout the literature of education or of public service generally.

One way to clarify the distinction is to note that administrative decentralization is the decentralization of management or operational functions while political decentralization is the decentralization of governance functions. A number of authors have noted differences between administrative decentralization and community control as an example of political decentralization.[1] Relative to a district that has one central board of education, a district that has a number of sub-district boards such as New York or Detroit, would be politically decentralized. A parent council or a site council of an individual school building having decision authority with respect to some aspect of budget, program, or personnel assignment, would be an example of political decentralization relative to either a single central board or a regional board governance plan. The establishment of regional or building level community advisory groups would be examples of different degrees of political decentralization or different points along a political decentralization continuum. Points of progressively increased centralization along the same continuum would be educational policy authority vested in a local school board, a state board of education or state legislature, or in the United States Congress.

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[1] See Lyke, p. 112; Allan C. Ornstein, Metropolitan Schools: Administrative Decentralization vs. Community Control (Metuchen, NJ: The Scarecrow Press, Inc., 1974), pp. ix-xi; LaNoue and Smith, p. 26.

Examples to illustrate administrative decentralization would include an area superintendent having discretion in the selection of a principal within her area of the district rather than central office personnel making the decision; a building principal determining the portion of funds allocated to the building that will be budgeted for a particular purpose rather than budget line item amounts being determined centrally for each building; or the curriculum committee of a particular building establishing a new sequence of study within a content area rather than such a sequence being mandated by a central office curriculum administrator.

Although the line between administration and governance is often indistinct, if at all discernable, administrative and political decentralization are both important concepts in the understanding of the educational organizations. The interface of these functions is a complex and much debated aspect of American political and educational systems. An analysis of the arguments, theories, and research findings concerning the governance/administration question and the closely related issue of public or professional control of public education has been presented by Boyd.[1] Any investigation of decentralization within education must necessarily be sensitive to the administrative decentralization/political decentralization distinction.

Value and Interest Issues

The ongoing struggle between the forces of centralization and decentralization in American education can be examined from a variety of perspectives. Previous sections have pointed to some of the events

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[1] Boyd.

and trends which have marked the struggle throughout the history of this country. Another perspective from which to examine this struggle is to identify some of the value and interest that can be related to the centralization or decentralization issues of authority and power for public education.

According to Garms, Guthrie, and Pierce,

> American culture contains three strongly held values that significantly influence public policy; equality, efficiency, and liberty. Belief in these values has historical roots . . . deeply embedded in our common heritage . . . Despite widespread public devotion to these values as abstract goals, their ultimate fulfillment is well nigh impossible. At their roots, the three desired conditions are inconsistent and antithetical. Exclusive pursuit of one violates or eliminates the others."[1]

Determination of public policy involves an ongoing balancing of these often competing values.

The value of liberty for Americans has been maintained by the preservation of the opportunity to choose among different courses of action and by the wide dispersal of governmental systems marked by the "deliberate fragmentation of decision making authority."[2]

> Centralized authority was viewed as perilous because the prospect of exciting widespread control and uniformity. Formation of literally thousands of small school districts, portending both inefficiency and inequality, was intended as an antidote to the accumulation of power. Proximity to constituents, coupled with the electoral process, was taken as a means to enhance governmental responsiveness and preserve liberty.[3]

If decentralization, even to the point of fragmentation, is identified with the value of liberty, it has often been viewed as in conflict with equality and efficiency. With regard to equality Reller points out that "one factor supporting growing centralization,

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[1]Garms, Guthrie, and Pierce, p. 18.

[2]Ibid., p. 31. [3]Ibid.

especially by the courts, has probably been the excessive zeal of some local authorities for a position that is judged to be contrary to the larger public interest."[1] State efforts to achieve educational equality, in terms of finance or some form of minimal achievement standards, have necessarily been dependent upon centralization. The centralization that resulted from district consolidation and reform was most often advocated as a move toward efficiency. Recent compensatory educational and social efforts have demonstrated the conflicts which can also arise between equality and efficiency.

Closely related to the frequent inconsistency between the value of liberty and the value of efficiency and equality is the delicate balancing sought by the judicial branch between "collectivist" and "pluristic" interests associated with education. The 1976 Project of the Michigan Law Review presented a comprehensive investigation of these interests and identified decentralization of schools as one of the issues in which collectivist and pluralist interests can be identified. It was pointed out that "those who support decentralization are attempting to assert greater control over educational policy by moving the locus of power closer to the citizenry."[2] The devolution of decision authority and power to subunits of the city system is intended to allow for localized schools more responsive to the "pluralistic" interests of local communities, especially racial and ethnic minorities. Opponents of decentralization "assert the collectivist interest in ensuring that the educational system adequately prepares citizens to

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[1]Theodore Reller, Educational Administration in Metropolitan Areas (Bloomington, IN: Phi Delta Kappa Inc., 1974), p. 36.

[2]"Education and the Law: State Interests and Individual Rights," Michigan Law Review 74 (June 1976):1488.

function effectively in society, and claim that with neighborhood controls on schooling, this aim cannot be achieved."[1] Another concern expressed by opponents is that the state collectivist interest in integration will be impaired by decentralization.[2] Although the relationship between integration and decentralization may be "less tangible than many earlier commentators feared,"[3] the necessity to balance collectivist and pluralistic interests with regard to these two aspects of urban education remains.

According to Lyke, proponents of school centralization or decentralization, with or without community control, "disagree in part because they conflict on basic political issues."[4] The issues he discussed were:

1. The conflict between democratic control and professional autonomy
2. The conflict between substantive and procedural values in policy-formation
3. The conflict between community development and societal integration

The dispute between democratic control and professional autonomy is identified by Lyke as the "most fundamental conflict underlying the dispute over decentralization."[5] The argument for democratic control asserts that persons providing and administering public services should be accountable to the citizenry for policies and practices. On the other hand educators claim that as professionals, they like doctors and lawyers, should not be expected to perform effectively if under close

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[1]Ibid., p. 1491. [2]Ibid., p. 1492.

[3]LaNoue and Smith, p. 232. [4]Lyke, p. 121.

[5]Ibid., p. 122.

supervision of laymen.[1] Even though the status of teaching as a "profession" is often questioned,[2] the assertion of professional status and the accompanying prerogatives of autonomy is a reality and is one of the interest questions related to decentralization. The inclusion of community control as one of the dimensions of a decentralization plan has often placed this issue in sharp focus. The Oceanhill-Brownsville events were examples of why active community involvement or control is understood as threatening to autonomy of education professionals as well as to their job security. The conflict over lay or professional control of education has a long history in this country and has often been integrally related to the various centralization/decentralization arguments.

The second basic issue identified is whether greater value should be associated with the substance or the process of decision making. Some arguments for decentralization and community control have been based upon the belief that "certain procedures are desirable because they have significant side effects."[3] The wide involvement of all persons involved in the school operation and the extensive participation of citizens have been identified as worthwhile elements of educational decision making process because of the positive effects on the individuals involved regardless of the substance of the decision reached or the efficiency of the means of reaching it. On the other hand, both

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[1] Ibid.

[2] See Harry S. Broudy, The Real World of the Public Schools (New York: Harcourt Brace Jovanovich, Inc., 1972), pp. 36-67; Jean Hills, "Obstacles to Professional Self-Governance in Education," Administrator's Notebook 14 (1975-76):1-4.

[3] Lyke, p. 124.

centralists and decentralists have at times argued that "better" decisions could be reached by the particular authority arrangement they happen to advocate. Lyke raises the important question of "how possible is it to identify 'good' educational decisions?"[1]

The third basic issue cited by Lyke is the conflict between community development and societal integration. This issue has close relationship to the collectivist, pluralistic balancing addressed previously. Decentralized community control has been portrayed as "the first step toward community revitalization necessary to solve the complex social and economic problems of the ghetto."[2] Whether a balkanization of urban centers would increase a city's ability to solve its educational problems is much debated. Some see the solution rather in "planning and decision making on a wider, metropolitan basis."[3] Reller points out the value of "metropolitan" plan of school organization.[4] The relationship of city school organization to achievement of a desired level of societal integration is complex, and according to Lyke "it is best not to cast the debate over administrative reorganization of city schools in terms of general social and economic reform."[5]

The preceding discussion of value or interest questions related to school decentralization has by no means been comprehensive or exhaustive, but rather has attempted to illustrate the point that centralization/decentralization issues are integrally related to fundamental questions of value and interest. Such issues must necessarily be

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[1]Ibid., p. 125. [2]Ibid., p. 126. [3]Ibid., p. 127.

[4]Reller. [5]Lyke, p. 127.

considered from not just an organizational or educational perspective. It is also reasonable to assume that decisions with regard to these types of issues will continue to be decided not merely on organizational or educational criteria but also, and often primarily, on political criteria and usually by political processes.

Summary

Centralization/decentralization debates have occurred at various times in American educational history. The specific issues have changed over the years but the general struggle continues. The basic structure of America's educational system is founded in the very decentralized local district system that had developed by the early nineteen hundreds. Population expansion and growth of cities, consolidation, and urban political and administrative reform had definite centralizing influences. In recent decades, increased legislative, regulatory, and judicial activity at the state and federal levels with regard to education have resulted in additional drift toward centralization of educational authority. Both within the internal structure of school district organizations and within the larger network of governmental agencies and authorities, educational decision making has been becoming increasingly centralized.

Given the context of a general flow toward centralization, and, in some cases, in an effort to counterbalance the flow, decentralization has been a prominent issue with regard to the organizational structure of many individual school districts. Beginning in the late 1960's, a good number of the nation's larger urban school districts moved to decentralize by the establishment of regional or area subunits. Administrative efficiency and political sensitivity, in varying proportions,

provided the motivations and rationale for these decentralized plans. The extent to which these plans have accomplished their stated or intended purposes is a question which in most cases has not received a satisfactory or empirically supported answer.

Currently advocated school decentralization plans frequently call for increased school site autonomy, the devolution of decision authority from central district or even regional offices to the individual school building or site. Such plans are being suggested for and adopted by districts of various sizes and not merely the very large. Site autonomy is an aspect of the historically extensive overall question of decentralization or centralization of public education, and for that reason the theoretical and empirical investigation of school site autonomy in this research project has been set within the context of the continuing history of centralization/decentralization controversies in education.

Decentralization as an Organizational Issue

Decentralization of school districts by increasing the autonomy of individual school sites within the district has been proposed as a means of enhancing the organizational effectiveness of schools. Such proposals are necessarily based upon a belief or an assumption that administrative decentralization of school district organizational structures will have positive and predictable organizational implications or effects. Successfully predicting the organizational implications of decentralization for organizations generally or for schools specifically may in fact be quite precarious. As this section of the review demonstrates, extensive theoretical uncertainty and conflicting research exist with regard to the organizational correlates of decentralization.

Specifically considered is the uncertainty of relationship between decentralization and other aspects of the structure of organizational control. One could reasonably argue that both the extent and methods of control uses within school organizations are significant issues. If the implications of decentralization for the overall organizational control structure are a source of theoretical and empirical uncertainty, one might well question whether a sound basis in fact exists for predicting that administrative decentralization may be depended upon to enhance the organizational effectiveness of schools. Examination of this issue will involve a brief discussion of the literature with regard to organizational control, a presentation of theoretical and empirical literature concerning the decentralization-control relationship, and a discussion of some of the important measurement questions related to investigations of organizational decentralization.

Organizational Control

McMahon and Ivancevich have identified two streams of thought in the literature concerning organizational control. The first is the classical or traditional approach which is control over members and primarily results in compliance. This type of control is viewed as being a fixed sum, a function of structure and authority, and as being exercised unilaterally in a vertical direction. The second viewpoint is the contemporary or behavioral approach which focuses on control by the members. This type of control viewed as non-zero sum, a function of interpersonal influence, and as flowing horizontally and diagonally

as well as vertically, based upon mutual understanding.[1] The concept of control discussed here refers to organizational control in the classical or traditional sense of control over members of the organization.

According to Etzioni, "Organizational control structure is a distribution of means used by an organization to elicit the performances it needs and to check whether the quantities and qualities of such performances are in accord with the organizational specification."[2] March and Simon define an organization's structure as "those aspects of the pattern of behavior in the organization that are relatively stable and that change only slowly."[3] Organizational control structure is the portion of the total organizational structure that is used by the organization to elicit and check for desired performances. Ouchi concludes that the "structure of an organization is not isomorphic with its control system. Structure is related to control."[4] The degree of relationship is determined by the extent to which the organizational structure functions to control organizational behavior. The control structure or control system of an organization is a subset of and inseparable from the total organizational structure.

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[1]Timothy J. McMahon and John M. Ivancevich, "A Study of Control in a Manufacturing Organization: Managers and Nonmanagers," Administrative Science Quarterly 21 (March 1976):66-67.

[2]Amitai Etzioni, "Organizational Control Structure," in Handbook of Organizations, ed. James G. March (Chicago: Rand McNally and Co., 1965), p. 650.

[3]James G. March and Herbert A. Simon, Organizations (New York: John Wiley and Sons, Inc., 1976), p. 170.

[4]William G. Ouchi, "The Relationship Between Organizational Structure and Organizational Control," Administrative Science Quarterly 22 (March 1977):110.

The literature provides a number of ways that different means of organizational control might be categorized or classified. Etzioni has identified three analytical categories: physical or coercive, material or utilitarian, and symbolic or identitive.[1] Pugh et al distinguish between control of resources and control of activities.[2] Blau points to a fundamental distinction between direct and indirect controls.[3] Perrow considered three categories of control: fully obtrusive direct controls such as orders, direct surveillance, and rules and regulations; fairly obtrusive bureaucratic controls such as specialization and standardization and hierarchy; and full unobtrusive controls such as controlling underlying decision premises.[4] Nelson and Machin considered control based upon the specification of activities, control based upon the specification of outputs or outcomes, and control based upon human and organizational relationships.[5]

Reeves and Woodward discuss two possible meanings of control. The first is control as an ante-factum exercise, that is to direct in the light of pre-knowledge of, or in anticipation of future circumstances. The second is control as a post-factum exercise, that is monitoring the outcomes of activity, reviewing feedback and, if

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[1]Etzioni, "Organizational Control Structure," p. 650.

[2]D. S. Pugh et al., "A Conceptual Scheme for Organizational Analysis," Administrative Science Quarterly 8 (December 1963):304-305.

[3]Peter M. Blau, "The Hierarchy of Authority in Organizations," American Journal of Sociology 73 (January 1968):465.

[4]Charles Perrow, Complex Organizations: A Critical Essay, 2nd ed. (Glenview, IL: Scott, Foresman and Co., 1969), pp. 150-151.

[5]Edwin G. Nelson and John L. Machin, "Management Control: Systems Thinking Applied to the Development of a Framework for Empirical Studies," Journal of Management Studies 13 (October 1976):278-279.

necessary, taking corrective action.[1] March and Simon make a somewhat similar distinction in noting that only two kinds of phenomena are measured, behavior and outputs.[2] Ouchi's investigations of control have been based upon differences between personal surveillance or behavior control and measurement of output or output control. This general distinction has also been described as personal versus impersonal control or personal versus mechanical control.[3]

Various listings of the means or mechanisms of control have emphasized different aspects of the concept and therefore have arrived at varying conclusions. Ouchi and Maguire listed selection, training, socialization, bureaucracy, formalization, and output measurement.[4] Structural dimensions of control listed by Evan include span of control, number of levels of authority, administrative ratio, time span discretion, degree of centralization of decision making, and limitations on decision discretion.[5] With specific reference to schools Anderson has listed means of control under the headings of supervision, impersonal mechanisms, professional standards, and bureaucratic rules.[6] Compilation of an exhaustive list or establishment of truly distinct

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[1]Thomas K. Reeves and Joan Woodward, "The Study of Managerial Control," in Industrial Organization: Behavior and Control, ed. Joan Woodward (London: Oxford University Press, 1970), p. 38.

[2]March and Simon, p. 145.

[3]William G. Ouchi and Mary Ann Maguire, "Organizational Control: Two Functions," Administrative Science Quarterly 20 (December 1975):599.

[4]Ibid.

[5]William G. Evan, "Indices of Hierarchical Structure of Industrial Organizations," Management Science 9 (April 1963):471-472.

[6]James G. Anderson, Bureaucracy in Education (Baltimore: Johns Hopkins Press, 1968), pp. 16-39.

categories may in principle not be possible, but the ubiquity of control as an organizational issue is undeniable. In his analysis of schools as formal organizations Bidwell notes that control "emerges as a central organizational process."[1]

Decentralization/Structuring of Activities

Pugh and his fellow Aston researchers, using a factor analytic procedure, identified the characteristics of standardization, specialization, and formalization as the dimension of "structuring of activities."[2] Hickson's review of twenty-one theorists of the structure of organizations concludes that "theory has converged upon the specificity (or precision) of role prescription and its obverse, the range of legitimate discretion."[3] Pugh et al point out that "specificity has a very close affinity to structuring."[4] The empirically derived dimension of structuring of activities and general concept of specificity of role prescription derived from the literature both include the characteristics of standardization, specialization, and formalization. Adopting Pugh's terminology, one could defensibly argue that structuring of activities is a centrally important aspect or dimension of organizational structure. As such, an understanding of its relationship to centralization or decentralization is a matter of some organizational significance that remains unresolved.

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[1]Bidwell, p. 1014.

[2]Pugh et al., "Dimensions," pp. 85-86.

[3]D. J. Hickson, "A Convergence in Organization Theory," Administrative Science Quarterly 11 (September 1966):225.

[4]Pugh et al., "Dimensions," p. 85.

The controversy in the literature concerning the relationship between centralization and structuring of activities is observable both on theoretical and empirical levels. One aspect of theoretical dispute is the existence of varying interpretations of Weber's bureaucratic type with respect to centralization. According to Mansfield, "the variable in Weber's description which best defined an administrative system as bureaucratic was the extent to which that administration was based upon procedures proscribed by general rules."[1] A second principle stated by Weber is a strict hierarchy of authority. Yet Mansfield argues that:

> At no point did he (Weber) suggest, however, that centralization of decision making in such a hierarchy was a characteristic of bureaucracy nor did he even make explicit the relationship between bureaucracy and centralization.[2]

Blau concurs in this opinion when stating that "no unequivocal hypotheses can be derived from Weber's analysis concerning the relationship between formalization and centralization."[3]

Some authors have interpreted Weber as identifying positive relationships between centralization and the bureaucratic elements of formalization and standardization. Hage attributes to Weber the basic propositions that "the higher the centralization, the higher the formalization."[4] Mansfield has pointed out that "Hage's concept of

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[1]Roger Mansfield, "Bureaucracy and Centralization: An Examination of Organizational Structure," Administrative Science Quarterly 18 (December 1973):478.

[2]Ibid.

[3]Blau, "Decentralization in Bureaucracies," p. 151.

[4]Jerald Hage, "An Axiomatic Theory of Organizations," Administrative Science Quarterly 10 (December 1965):297.

formalization would seem to be closer to Weber's definition of bureaucracy."[1] The Aston researchers also attribute the hypothesis that "specialization, formalization, and centralization would be highly positively correlated" to the Weberian tradition and the notion that bureaucracies pass decisions to upper levels."[2]

A negative relationship between centralization and bureaucratic structuring has also been attributed to Weber. Mansfield comments that the closest Weber came to stating such a relationship between bureaucratic structuring and centralization was pointing out that hierarchical subordination within a bureaucracy does not mean "that the 'higher' authority is simply authorized to take over the business of the 'lower.' Indeed the opposite is the rule."[3] Mansfield states that "the rules of the bureaucracy not only legitimate the power of the superordinate over a subordinate, they also delimit the extent of his authority."[4] Child interprets Weber's analysis as providing the proposition that "structuring variables will be negatively related to the centralization of decision making."[5]

"Max Weber's analysis of bureaucracy continues to provide the single, most influential statement on the structural rationale of contemporary organizations."[6] Yet, there is distinct disagreement concerning Weber's analysis of bureaucratic structure as it related to

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[1]Mansfield, p. 478.

[2]Pugh et al., "Dimensions," p. 82.

[3]Hans Gerth and C. Wright Mills, eds. and trans. From Max Weber: Essays in Sociology (New York: Oxford University Press, 1946), p. 197.

[4]Mansfield, p. 478. [5]Child, "Organization Structure," p. 163.

[6]Ibid.

centralization. Referring to this area of disagreement, Mansfield states:

> All these differences of opinion suggest that consideration of this relationship is important, given that the concepts of bureaucracy and centralization occupy a key place in theories or organizational behavior.
>
> Examination of the empirical evidence regarding the relationship between bureaucracy and centralization suggest that it is no less confusing than theoretical writing on the subject.[1]

Empirical evidence has been presented in the literature supporting each of the three relationships hypothesized in the theoretical literature. The first relationship is that bureaucratic structuring of activities is positively related to centralization and negatively related to decentralization. Hage and Aiken's study of sixteen health and welfare organizations provides some limited support for this hypothesis.[2] Holdaway and his associates studied community, private, and agricultural colleges in Canada and found strong correlation between centralization and bureaucratic variables such as formalization, role specification, and standardization.[3] It is interesting to note that the Holdaway study was an attempt to replicate the Aston procedures using different organizations in a different area. The findings with regard to centralization are distinctly different from those presented by the Aston group.

The Aston studies by Pugh and his colleagues involved an examination of 52 organizations in the area surrounding the University of Aston in Birmingham, England with regard to five aspects of structure: specialization, standardization, formalization, centralization, and

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[1]Mansfield, pp. 478-479. [2]Hage and Aiken, p. 89.

[3]Holdaway et al., p. 45.

configuration. Using a principle components analysis to analyze the data, the researchers "empirically established the underlying dimensions of organization structure."[1] The first factor was called structuring of activities and included measures of standardization, formalization, and specialization. A second factor included centralization. Based upon the discrepancy between this finding and the hypothesized positive correlation between specialization, formalization, and centralization, which they attribute to the "Weberian tradition,"[2] Pugh et al conclude that bureaucracy is not unitary and that the "concept of the bureaucratic type is no longer useful."[3] Another way of stating this conclusion would be that structuring of activities varies independently of centralization.

The hypothesis of independence of structuring of activities from centralization was supported by Reimann's study of 19 United States manufacturing organizations. Using cluster analysis, Reimann identified decentralization and formalization as two independent dimensions of a three dimensional structural space.[4] Reimann concluded that the form of an organization's bureaucratic structure may be largely irrelevant to an organization's success and that the open systems principle of equifinality may also apply to bureaucratic structure."[5]

A third hypothesis, which has received the greatest amount of empirical support, is that structuring of activities is negatively

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[1]Pugh et al., "Dimensions," pp. 88-89. [2]Ibid., p. 82.

[3]Ibid., p. 88.

[4]Bernard C. Reimann, "On the Dimensions of Bureaucratic Structure: An Empirical Reappraisal," Administrative Science Quarterly 18 (December 1973):462-476.

[5]Ibid., p. 471.

related to centralization. Evidence consistent with this hypothesis supports a unified concept of control which has been called the "administrative reduction of variance" model.[1] According to this model two major strategies of administrative control are available, control through bureaucratization (structuring of activities) or control through centralization of decision making. According to Child, the two control strategies serve as different ways to limit discretion and to prescribe work roles.[2]

Child and other researchers have presented research findings supporting this hypothesis. Child replicated the Aston procedures with a sample of 82 British organizations which he called the National study. Instead of finding centralization to be part of a factor independent of formalization, standardization, and specialization, Child found a single factor which included all of these variables with centralization related negatively to each of the others.[3]

Hinings and Lee also carried out a replication of the Aston procedures using a small sample of manufacturing organizations near Coventry. They found centralization to be negatively and significantly related to standardization and determined that the finding "suggests that as organizations regulate more and more behavior, so they decentralize."[4] Using a short form of the Aston measure, Inkson, Pugh, and Hickson found 14 organizations in the English Midlands, after four to five years, to have a trend in the "direction of increased structuring

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[1]Child, "Strategies of Control," p. 1. [2]Ibid.

[3]Child, "Organization Structure," p. 173.

[4]C. R. Hinings and Gloria L. Lee, "Dimensions of Organization Structure and Their Context: A Replication," Sociology 5 (January 1971): 86.

of activities coupled with decreased concentration of authority.[1] Blau and Schoenherr's study of employment security agencies found that "Bureaucratized procedures foster decentralization."[2] They stated that "the restraints imposed by formalized procedures encourage the development of a less centralized authority structure that permits more flexible decision-making."[3] Meyer also identified the compensating relationship between formalization of authority.[4] For Khandwalla the use of "sophisticated controls" rather than "standardized operating procedures, formalizations, and the like" is the measure of organizational regulation, but he also finds a positive relationship between the use of controls and decentralization.[5] Such findings are consistent with the hypothesis of a negative relationship between structuring of activities and centralization or the concept that structuring and centralization are alternative means of organization control.

Several researchers have proposed possible means of explaining differences in research findings concerning the relationship between the structural dimensions of centralization or decentralization and structuring of activities. Reimann suggested that one problem may be "failure to analyze the relationship between an organization's

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[1]J. H. K. Inkson, D. S. Pugh, and D. J. Hickson, "Organization Context and Structure," Administrative Science Quarterly 15 (September 1970):318.

[2]Peter M. Blau and Richard A. Schoenherr, The Structure of Organizations (New York: Basic Books, Inc., 1971), p. 116.

[3]Ibid., p. 121.

[4]Marshall W. Meyer, Bureaucratic Structure and Authority (New York: Harper and Row Publishers, Inc., 1972), p. 56.

[5]Pradip N. Khandwalla, "Mass Output Orientation of Operations Technology and Organizational Structure," Administrative Science Quarterly 19 (March 1974):78-79.

structural arrangements and its performance."[1] He has also suggested that structural relationships may not be universal but that they exist.[2] Donaldson proposed that differences in organizational status, as between branches or principal units, might explain some discrepancies. His reanalysis of the Aston data failed to provide support for his hypothesis.[3] Greenwood and Hinings used their study of English local governmental departments to point out that more reliable results might be obtained by viewing centralization as a set of subscales rather than as one single measure.[4] Sathe has demonstrated the differing results of research concerning the relationship between centralization and formalization using "institutional" and "questionnaire" measures of organizational structure.[5] Given these explanations and findings, it would appear that a particularly crucial aspect of research concerning organizational decentralization is the specific concept of decentralization considered as a variable and how that variable is measured for a particular type of organization.

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[1]Bernard C. Reimann, "Dimensions of Structure in Effective Organizations: Some Empirical Evidence," Academy of Management Journal 17 (December 1974):705.

[2]Ibid., p. 695.

[3]Lex Donaldson, John Child, and Howard Aldrich, "The Aston Findings on Centralization: Further Discussion," Administrative Science Quarterly 20 (September 1975):453-460.

[4]Greenwood and Hinings.

[5]Vijay Sathe, "Institutional Versus Questionnaire Measures of Organizational Structure," Academy of Management Journal 21 (June 1978):229.

Measurement of Decentralization

Delegation, distribution, unit autonomy

Various methods have been presented in the literature for operationalizing the concepts of centralization and decentralization and of measuring variations in the presence of the variable as operationalized. A study of 19 manufacturing organizations by Reimann illustrated the use of three common conceptualizations of decentralization. Reimann included three variables which can be categorized as delegation, distribution, and unit autonomy type measures of decentralization. According to Reimann, "Delegation of authority consisted of the number of specific management decisions the chief executive delegated to the number he had authority to make."[1] Distribution is measured by what is called the "centralization index" and is a function of the locus of decision making for specific major policies, the degree to which different levels participate in planning, and the degree of information sharing between levels.[2] The location of decision authority among various levels and the participation of various levels in decisions are the features most characteristic of distribution type measures of decentralization. Reimann uses the term "lack of autonomy" to designate the degree of unit autonomy. This variable is a measure of "the extent to which top management had to refer certain typical decisions to a higher level of authority (outside the organizational unit being examined).[3]

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[1]Reimann, "Dimensions of Structure in Effective Organizations," p. 698.

[2]Ibid.

[3]Ibid., p. 697.

Delegation

A clear example of the measurement of a delegation concept of decentralization is presented by Khandwalla who asked presidents of 79 manufacturing firms "the extent to which the chief executive officer of the firm . . . had delegated decision-making authority in each of nine key areas of decision-making."[1] The response scale used ranged from "no delegation of authority from the top: the decision is made by the chief executive or the board of directors, or equivalent, exclusively" to "complete delegation of authority: the decision is made by the appropriate subordinates of the chief executive or the board of directors (equivalent)."[2]

Distribution

Distribution concept of decentralization or centralization has been used by a number of researchers. According to Pugh et al, "centralization becomes a measure derived from the authority located at levels within one given organization."[3] According to Hage, centralization "is measured by the proportion of occupations or jobs whose occupants participate in decision making and the number of areas in which they participate."[4] Blau et al measured decentralization of decision making authority by determining "the administrative level at which 25 key decisions are made."[5] For Bacharach and Aiken, "Decentralization of authority was measured by examining the reported

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[1]Khandwalla, p. 85. [2]Ibid., pp. 85-86.

[3]Pugh et al., "A Conceptual Scheme," p. 305. [4]Hage, p. 295.

[5]Peter M. Blau et al., "Technology and Organization in Manufacturing," Administrative Science Quarterly 21 (March 1976):24.

authority of organizational actors in making 18 strategic decisions."[1] Robey, Bakr, and Miller obtain a "measure of centralization of authority" by determining the number of decisions made at each level of the organization hierarchy.[2] The problem of equating authority levels across organizations is dealt with by weighting the levels. "Intermediate levels were weighted equidistantly for the number of levels in that particular structure. Thus, the measures of centralization were comparable across organizations with varying numbers of levels."[3]

Unit autonomy

Becker and Gordon explain decentralization as being "related to the degree of autonomy across organizational units."[4] Unit autonomy is the third type of decentralization identified in the literature.

> Autonomy is equated with the extent to which the activities of one component of the organization are independent of the activities of other components of the organization. In other words, the degree to which an organizational unit is autonomous varies inversely with the degree to which its activities are coordinated with other organizational units. The autonomy of an organizational unit theoretically can vary from total interdependence to almost total independence.[5]

Becker and Gordon operationally define the degree of organizational decentralization by "the amount of general resources which managers are permitted to allocate without approval from their superiors in the hierarchy, divided by the total resources of the organization."[6]

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[1]Samuel B. Bacharach and Michael Aiken, "Communication in Administrative Bureaucracies," Academy of Management Journal 20 (1977):371.

[2]Daniel Robey, M. M. Bakr, and Thomas S. Miller, "Organizational Size and Management Autonomy: Some Structural Discontinuities," Academy of Management Journal 20 (1977):383.

[3]Ibid., p. 384. [4]Becker and Bordon, p. 337.

[5]Ibid. [6]Ibid., p. 338.

Robey, Bakr, and Miller use a similar variable labeled "operations autonomy" which is defined as "the proportion of final decisions made by the resident operations manager and his staff, which includes any decisions delegated by him to his subordinates."[1] A strength cited for the autonomy measure is that it "overcomes difficulties incurred by the weighted centralization measure. By focusing on a single organizational level, possible confounding effects of the number of levels may be avoided."[2]

Other issues

Research related to decentralization can be differentiated not only on the basis of whether the delegation, distribution, or unit autonomy concepts of decentralization are used but also important distinctions can be made based upon the type of measurement procedures used. Sathe distinguished between institutional and questionnaire measures.[3] Inkson, Payne, and Pugh identified the differences between objective and subjective measures.[4] Patchen documented the differences between index and global measures.[5] Greenwood and Hinings presented evidence to support the use of sets of subscale rather than overall measures for centralization or decentralization.[6]

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[1]Robey, Bakr, and Miller, p. 384. [2]Ibid.

[3]Sathe.

[4]Kerr Inkson, Roy Payne, and Derek Pugh, "Extending the Occupational Environment: The Measurement of Organizations," Occupational Psychology 41 (January 1967):33-47.

[5]Martin Patchen, "Alternative Questionnaire Approaches to the Measurement of Influence in Organizations," American Journal of Sociology 69 (July 1963):41-53.

[6]Greenwood and Hinings.

Institutional/questionnaire

The institutional approach to measurement of organizational structure, according to Sathe, relies on "organizational charts, documents, and interviews with key spokesmen of the organization in order to measure the various dimensions."[1] For the questionnaire method, "responses of a sample of organizational members are aggregated to obtain measures of organizational structure."[2] Sathe's review of research concerning the relationship between centralization and formalization indicates "a negative relationship between the two dimensions when institutional measures are used, but a positive relationship using questionnaire measures."[3] Sathe argues that the two types of measures should not be used interchangeably. He also indicates that institutional measures "generally tap the formal or designed structure," and that the questionnaire measures "tend to reflect the degree of structure experienced by organizational members in work related activities on a day-to-day basis" which describes "the emergent structure."[4]

Objective/subjective

Inkson, Payne, and Pugh's distinction between objective and subjective organizational measurement is closely related to the distinction above by Sathe.

> Measurement of objective data implies direct assessment of organizational properties without transformation through a human intermediary. Measurements of subjective data implies assessment by aggregation of individual perceptions of the organization's members.[5]

Inkson also mentioned a third method, field observation, which provides

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[1]Sathe, p. 227. [2]Ibid. [3]Ibid., p. 233.

[4]Ibid., p. 234. [5]Inkson, Payne, and Pugh, p. 36.

depth of observation but makes the cost of obtaining sufficient sample size prohibitive. An important limitation of the measurement of subjective or aggregated perceptual data identified is "the necessity of obtaining not just a sample of subjects, but a sample of subjects in each of an adequate sample of organizations."[1]

> The chief disadvantage of 'perceptual' methods for measurement of formal organization is their subjectivity, their susceptibility to informal influence. Perceptions of organization are important in shaping behavior and are clearly partly dependent on the formal situation. Measurement of this type needs to be allied to more objective measures, for the key to understanding organizational behavior is in the relationship between the two.[2]

The authors presented a review of research in which the measurement of objective data had been used and argued in support of the use of objective data and the "measurement of variables in the work environment."[3]

Global/specific

The question addressed by Patchen was whether to employ "global questions that ask the respondent to generalize" or "relatively specific, detailed questions."[4] Global questions are presented as having the advantages of brevity, simplicity, less time required for response, less specific knowledge of the organization needed, and a decreased dependence on an arbitrary selection of specifics. On the other hand, in response to a global question, each respondent "may be thinking of different specifics when he is asked to make an overall judgment" or "he may give different weights to the various specifics than another man does."[5] Patchen uses both global measures and an index of specific measures to study influence within a manufacturing company and a set of

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[1]Ibid., p. 37. [2]Ibid. [3]Ibid., p. 45.

[4]Patchen, p. 41. [5]Ibid., p. 42.

automobile dealerships. Patchen found less variance within units on the index measure of influence than on the global measures.[1] The conclusions from the study indicate that indexes for specific questions are more reliable measures of influence structures than are global-type questions. Global-type questions are equally good for predicting employee morale.[2]

Subscales

Greenwood and Hinings suggested "that much greater reliability can be obtained from viewing centralization as a set of subscales."[3] Data from their study of English local authority departments indicated that "the centralization subscales do not correlate" therefore "disqualifying the use of overall centralization measures."[4] Support for the nonunitary nature of the centralization/decentralization dimension is provided by Blau's findings of "four nearly orthogonal components of decentralization."[5] The factors are identified as delegation of personnel authority, delegation of responsibility for preparing the budget, decentralization of influence in making major structural changes in divisions, and delegation of responsibility to managers of local finance offices.[6] The relationship between structural dimensions using these subscales is found to be indirect, as "personnel regulations foster decentralization not of personnel but of other decisions."[7] Greenwood

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[1]Ibid., p. 45. [2]Ibid., p. 52.

[3]Greenwood and Hinings, p. 153. [4]Ibid., p. 154.

[5]Blau, "Decentralization in Bureaucracies," pp. 156-157.

[6]Blau, The Structure of Organizations, pp. 112-113.

[7]Ibid., p. 116.

and Hinings also reported indirect rather than direct relationship between the subscale measures of centralization and standardization.[1] Given the lack of correlation between subscales of decentralization and the finding of indirect relationships between subscales of different structural characteristics the identification and use of subscales rather than unitary measures of the centralization/decentralization would appear advisable.

Summary

This section of the review has examined three aspects of decentralization as an organizational issue. Considered first was the concept of organizational control and the identification of the centralization/decentralization dimension as an important element in the total structure of control. The second portion specifically examined the theoretical and empirical uncertainty that exists concerning the relationship between the centralization/decentralization dimension and another important aspect of organizational control, the structuring of activities. The primary points of emphasis for these portions of the review are the essential nature of organizational control, the significance of the centralization/decentralization dimension with the overall pattern of control, and the existence of fundamental questions concerning the implications of variations in the centralization/decentralization dimension for other aspects of the overall structure of control.

Some of the uncertainty that exists with regard to the organizational correlates of decentralization has been attributed to problems

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[1] Greenwood and Hinings, p. 154.

or issues related to the measurement of decentralization. Distinctions between three ways of conceptualizing and operationalizing decentralization were examined and the advantages of comparability gained by unit autonomy conceptualization were considered. Other issues addressed were the importance of distinctions between institutional and questionnaire measures, between objective and subjective measures, between global and specific questions, and between unitary measures and subscales. How decentralization is conceptualized and what measurement techniques are employed were pointed out as essential considerations for any research addressing decentralization as an organizational issue.

Research Related to School Site Autonomy

Preceding sections of this review have demonstrated the historical and political significance of centralization/decentralization issues in education and the importance of decentralization as an organizational issue. Uncertainties concerning the organizational implication of decentralization and questions related to the measure of decentralization have also been cited. In this section research related to school site autonomy as a specific form of decentralization is reviewed.

The autonomy of school sites has not been included as a specifically identified variable in many research projects. Certain aspects of the concept of site autonomy or concepts related to it have been included in a number of studies. Available research findings related to school site autonomy may be considered under the following four categories: (1) extent of implementation of school site autonomy plans, (2) dimensions of differences in site autonomy, (3) consensus of perceptions about autonomy, and (4) relationship of site autonomy to other variables.

Extent of Implementation

National data

In 1975, Educational Research Service published the results of a national survey in which 46.6% of the responding school districts reported having policies which encouraged decentralized decision making on the part of building principals. Another 15.2% being in the process of developing such policies. Policies of decentralized decision making were most frequently reported by districts which enrolled 12,600 to 24,999 students and were least frequently reported by districts which enrolled less than 3,000 students.[1]

Another 1975 study, reported by Cawelti, presented the findings of a survey of 46 large urban school districts from throughout the United States regarding the distribution of curriculum decision making among central, regional, or building level personnel.[2] The responses from district directors of instruction indicated that for five of the ten issues or tasks used as items for the study, the central office was most influential for one item, and building level personnel most influential for four issues or tasks.[3]

A 1977 study conducted by the National Association of Secondary School Principals included several questions related to the extent of authority available to high school building level administrators. Responses to these questions indicated quite a wide range of variation

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[1]Powell, p. 2.

[2]Gordon Cawelti, "Urban School Decentralization and Curriculum Development Strategies," in Impact of Decentralization on Curriculum, ed. Ezra I. Staples (Washington, DC: Association for Supervision and Curriculum Development, 1975).

[3]Ibid., p. 24.

in levels of authority with regard to the allocation of discretionary funds, budget allocations, allocation of staff resources, and staff selection.[1]

Florida

School-based management is part of the overall educational plan in Florida. According to the Educational Accountability Act of 1976, Section 229.55(1)(b), Florida Statutes:

> . . . Each district school board shall utilize its system of planning and budgeting to emphasize a system of school-based management in which individual school centers become the principal planning units and eventually to integrate planning and budgeting at the school level.

As part of his 1977 analysis of implications of Florida legislation for competencies necessary for school principals, Muldoon commented that "the state of Florida is clearly on the road toward making the individual school the decision-making center."[2] On the other hand, in 1978 Pierce observed, based upon his statewide study, that school-based management "has been unevenly implemented in Florida. Only a few districts have moved to fully decentralize decision making."[3] Data provided by the Florida Department of Education substantiates Pierce's observation. In response to 14 questions concerning whether specific types of decisions were made by school level personnel or district personnel, 67 county district superintendents provided greatly varying

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[1]David R. Byrne, Susan A. Hines, and Lloyd E. McCleary, The Senior High School Principalship Volume I: The National Survey (Reston, VA: National Association of Secondary School Principals, 1978), p. 24.

[2]John O. Muldoon, "Implications of Florida Legislation for School Principals' Competencies," (Ph.D. dissertation, The Florida State University, 1977), p. 57.

[3]Pierce, Decentralization, p. 3.

responses. One superintendent indicated that 13 of the 14 decisions were made at the school level while another superintendent indicated that none of the decisions were made at the school level. Responses from other districts varied across a range from two to eleven of the decisions being made at the school level.[1] The report also showed differences among the districts in the degree to which team management and parent involvement were part of the districts' decision processes.[2]

The extent to which school-based management has been implemented by those Florida districts most committed to decentralized management is evidenced by a 1977 report by Simpson. He studied four districts which were selected based upon their "willingness to participate and their reputed degree of development of a school-based management operation in their system."[3] He found that perceptions of a variety of persons from the selected districts concerning practices in their districts were generally consistent with the 12 characteristics and 34 indicators of school-based management that he had derived from the literature.[4]

California

Like Florida, California is a state that has witnessed extensive adoption of site level decentralization plans. In California such plans are commonly referred to as school-site management plans rather than school-based management. In 1974 Craig observed that implementation of site management plans in California had "occurred in the absence of

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[1]School Based Management: A Survey of Florida School Districts 1977-78 (Tallahassee, FL: Florida Department of Education, 1978), p. 3.

[2]Ibid., pp. 7-11. [3]Simpson, p. 71.

[4]Ibid., pp. 160-162.

legislative mandate or overt political pressure."[1] She reported the results of a study in which 85 of 104 California districts of varying sizes claimed to have been using school-site budgeting techniques.[2] Stone's report of a 1973 survey of California districts having between 10,000 and 60,000 students indicated that 76.6% of the districts from which responses were received considered themselves to be decentralized or to be in the process of decentralizing.[3] The extent of adoption of plans for decentralization to the building level is also indicated by information reported in a 1977 California State Department of Education document which listed 61 districts which had been identified as decentralized or partially decentralized. Thirteen districts were specifically designated as allowing extensive decision latitude at the building level.[4] The listing of decentralized districts was not exhaustive nor did it represent the overall extent of site management implementation. It did indicate that school-site management principles were recognized at that time by a significant number of districts in the state.

California Assembly Bill 65, which was signed in 1977, has been called "the most comprehensive bill for education policy in the nation." This bill recognizes aspects of the overall school-site management strategy, specifically funding and program decisions at the building level based upon wide participation of persons involved at the individual school, including parents.[5] Even though school-site management

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[1]Craig, p. i. [2]Ibid., p. 10.

[3]Clarke R. Stone, "Decentralization and Decision Making: An Analysis of the Perceptions of High School Principals and Central Office Administrators," (Ed.D. dissertation, University of Southern California, 1973), p. 51.

[4]Decker, pp. 24-26. [5]Kirst, "Beyond Serrano," pp. 8-9.

plans may have been initiated extensively in California without legislation or public pressure, building level decentralized management has become part of the overall state educational policy.

Individual districts

Examples of implementation of site level decentralization plans have been reported for a number of individual school districts throughout the country. The Lansing, Michigan plan of decentralized administration is known as "Responsible Autonomy" and has been investigated in studies by Throop,[1] Moore,[2] Haak,[3] and Neveaux.[4] Neveaux also reported on the decentralized administrative plan used in East Detroit, Michigan. McNutt studied the transition from centralized administration to decentralized administration in Monroe County, Florida.[5] Hines investigated an attempt by the Bellevue, Washington school district to move instructional decision making to the building level.[6] District reorganization

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[1]Frank Allen Throop, "Professional Autonomy in the Lansing Public Schools: A Model for the Decentralization of Administrative Functions in an Urban School System" (Ph.D. dissertation, Michigan State University, 1973).

[2]Duane H. Moore, "An Evaluation Study of Responsible Autonomy in the Lansing Public Elementary Schools" (Ph.D. dissertation, Michigan State University, 1976).

[3]William H. Haak, "An Evaluative Study of Responsible Autonomy in the Lansing Public Junior High Schools" (Ph.D. dissertation, Michigan State University, 1978).

[4]Mark J. Neveaux, "The Decision-Making Role of a Building Principal in Regard to Administrative Decentralization" (Ed.D dissertation, The University of Michigan, 1976).

[5]James N. McNutt, "Decentralization: A Study of Its Effect On Selected School Personnel in the Monroe County, Florida, School System" (Ed.D. dissertation, The University of Alabama, 1975).

[6]Darrel W. Hines, "An Analysis of Selected Concepts of the Actively Structured School Organization After Implementation in a Local District" (Ed.D. dissertation, University of Washington, 1976).

toward decentralized decision making in Shawnee Mission, Kansas was reported by Stewart.[1]

A variation of Cawelti's study of the distribution of curriculum decision making[2] was carried out in Madison, Wisconsin by Patterson and Hansen. Based upon data gathered from administrators at the central, regional, and building levels, Patterson and Hansen found a high degree of interlevel consensus for nine of ten decision items and that the building level was considered the most influential for the items. No information was presented as to the degree of intralevel consensus for the various items.[3]

School-based budgeting

"School-based budgeting is a central element of current interest in decentralization to the school level."[4] A number of studies have been reported which investigated the implementation of school-based, school-site, or lump sum budgeting. Kneale described the school-site lump sum budgeting system used in Broward County, Florida.[5] Seward's study of school-site budgeting was based upon an analysis of the differences in budgetary practices and spending patterns in two California school districts, one centralized and the other decentralized. He

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[1]David Stewart and Cecil Miskel, Changing Organizational Structure to Affect Perceived Bureaucracy, Organizational Processes, Loyalty, Job Satisfaction, and Effectiveness (Bethesda, MD: ERIC Document Reproduction Service, ED 136 423, 1977).

[2]Cawelti. [3]Patterson and Hansen.

[4]Caldwell and Hodgson, p. 1.

[5]Michael S. Kneale, "School Site Lump Sum Budgeting in Broward County, Florida: The Case of Management and Finance Reform" (Ed.D dissertation, Harvard University, 1977).

found greater expenditure diversity in the decentralized district.[1] An extensive study by Caldwell investigated the use of school-based budgeting in the Province of Alberta.[2] Duncan and Peach have also reported a Canadian study of the implementation of school-based budgetary practices.[3]

Implication of findings

The primary points to be derived from the research findings concerning the extent of implementation of site level autonomy plans are the following: (1) A significant number and variety of school districts have been identified as having attempted to increase the extent to which individual sites are autonomous. (2) Those studies which have gathered data from a number of schools and school districts have generally reported variations in the level of autonomy or decision authority available at the building level. (3) Available findings are either limited to one district, a small number of districts, a specific state or area or they are limited to a few concepts or items directly related to site autonomy. Research concerning the extent of implementation of school site autonomy plans indicates that there are variations in the autonomy available to school sites in school districts. The extent of such variation to be found among school districts generally and the decisions or types of decisions for which there are differences in autonomy have not been clearly established.

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[1]Seward, p. 80.

[2]Brian J. Caldwell, "Decentralized School Budgeting in Alberta: An Analysis of the Objectives, Adoption, Operation and Perceived Outcomes in Selected School Systems" (Ph.D. dissertation, The University of Alberta, 1977).

[3]Duncan and Peach.

Dimensions of Differences

Several studies have pointed to the existence of differences in the extent of autonomy with regard to different areas of responsibility. Giroux found in the district he studied that pupil personnel decisions were building level decisions while decisions with regard to curriculum, business management, staff personnel, and school-community relations were made at the central office.[1] Stone also found extensive building level authority in matters of student personnel. The area considered to be least decentralized was budgeting.[2] Based upon the data related to principal autonomy in her study of Michigan Schools, Hansen commented that:

> The results of this study suggest that autonomy may not be uniform across tasks in some communities or across communities for some tasks. It would appear that the unidimensionality of the instrument and the construct upon which it was based is in doubt. To develop an instrument that would more fully access autonomy may require adherence to a constraint that recognizes autonomy as situation and/or task specific.[3]

Differences in the extent of autonomy with respect to areas of responsibility have usually been noted based upon a priori groupings or categories. Hansen used the categories of personnel, organizations, budget building, curriculum development, instructional development, school-community/parent relations, and school plant.[4] Hansen derived

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[1]Roger M. Giroux, "Changes in Decision-Making Processes in a Sub-district Reorganization of an Urban School System" (Ph.D. dissertation, University of Wisconsin, 1970).

[2]Stone.

[3]Shirley J. Hansen, "The Principal and Accountability: A Study of the Relationships Among Elementary Principals' Ratings, Principal Autonomy, and Student Achievement" (Ph.D. dissertation, Michigan State University, 1975), p. 189.

[4]Ibid., p. 125.

these categories from a similar listing presented by Hencley, McCleary, and McGrath.[1] Lipham and Hoeh use the five categories of instructional program, staff personnel, pupil personnel, financial and physical resources, and school community relations.[2] The various categories used by researchers are numerous, but in most cases they are a priori. A question that has not been addressed is whether any dimensionality found in empirical data is consistent with the type of a priori categories often employed. Hansen has suggested that assessments of autonomy recognize the possible multidimensional character of autonomy. The dimensions to be included as variables or subscales in future research of site autonomy should be based upon empirical data rather than a priori categories, no matter how reasonable such categories may appear. Any correspondence between such categories and the realities of data should be demonstrated and not assumed.

Consensus of Perceptions

Inter-level consensus

The most prevalent type of research related to school or principal autonomy has investigated questions concerning the degree of decision authority or autonomy perceived by various persons within school districts. A frequent question has been the extent to which there is inter-level agreement among the hierarchical levels of a district. Burroughs reported finding no identifiable differences in

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[1]Stephen P. Hencley, Lloyd E. McCleary, and J. H. McGrath, The Elementary School Principalship (New York: Dodd, Mead and Co., 1970), pp. 82-87.

[2]James M. Lipham and James A. Hoeh, Jr., The Principalship: Foundations and Functions (New York: Harper and Row, Publishers, 1974), p. 161.

the decision making authority of elementary principals as perceived by principals and central office administrators in four California districts that were decentralized.[1] A parallel study by Stone reports that "the perception of high school principals and central office administrators were remarkably the same."[2]

A more frequent finding is that there are inter-level differences in the perceptions of building level authority. Hout's study of a single California district found that the level of authority with regard to a particular item most frequently selected by elementary principals agreed with the response of the superintendent for 55 of 100 decision items. For six items the superintendent believed the principal had more authority than the principals believed they had and for 39 items the superintendent perceived the principals as having less authority than principals believed they had.[3] Chrisman's Missouri study of secondary principal autonomy reported that superintendents tended to indicate that principals have more autonomy than principals assign to

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[1]Robert E. Burroughs, "Decentralization and Decision Making: An Analysis of Elementary School Principals' and Central Office Administrators' Perceptions" (Ed.D. dissertation, University of Southern California, 1973).

[2]Stone, p. 81.

[3]Don D. Hout, "The Decision-Making Authority of Elementary School Principals in a Unified School District in Southern California" (Ed.D. dissertation, University of Southern California, 1973), p. 73.

themselves.[1] Sahl[2] and Clairborne[3] have also reported inter-level differences in perceptions of building level decision authority. Meyer and others concluded from their San Francisco Bay area study that "there is no evidence for substantial consensus between principals and superintendents on any of a series of policy and procedure issues.[4]

Personal and professional characteristics

Attempts to explain differences in perception based upon personal or professional characteristics of individual respondents have been largely unsuccessful. Burroughs reported no identifiable difference in perceptions of degree of decision making authority of elementary principals based upon age, sex, years of administrative experience, years in present district, or management training.[5] In his study of decision making in Ohio public schools, Viering found that perceptions of who makes a decision did not differ significantly based upon years in position or years of administrative experience.[6] Sahl found extensive disagreement among and between reference groups within a school district

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[1]James W. Chrisman, "Some Factors Related to the Degree of Autonomy Exercised by Secondary School Principals in Missouri" (Ed.D. dissertation, University of Missouri, Columbia, 1969), p. 247.

[2]Kenneth G. Sahl, "The Decision-Making Role of the Secondary School Principal as Perceived by the Principal and Selected Reference Groups" (Ed.D. dissertation, University of Idaho, 1973).

[3]Clifford Claiborne, "A Comparison of Chicago Principals' and District Superintendents' Perceptions of Responsibility, Authority, and Accountability on Selected Tasks of the Principalship" (Ed.D. dissertation, University of Illinois at Urbana-Champaign, 1977).

[4]Meyer et al., pp. 242-243.

[5]Burroughs.

[6]Richard F. Viering, "Administrative Decentralization: Perceptual Study of a Model" (Ph.D. dissertation, Kent State University, 1970), pp. 188-189.

concerning 36 administrative tasks but demographic variables were not found to explain observed differences.[1]

Intra-level consensus

A question directly relevant to the present research is to what degree persons at the same organizational level within a district agree on the extent of authority delegated to the building level. Most of the studies that have investigated perceptions of building level or principal authority have not addressed the issue of intra-level consensus or dissensus. Those studies which have included multiple principals from one or more districts have tended to group all respondents irrespective of district or have not reported data concerning intra-level variation within districts.[2] The number of studies that have addressed intra-level consensus is quite limited.

In his study of elementary principals within a California district, Hout found "that there was a wide range in the perceptions of principals of their decision-making authority."[3] Sahl also found extensive within group disagreement concerning the principal's decision-making role within the district he studied.[4] As part of their study of a centralized and a decentralized district, Marschak and Thomason asked elementary principals to respond to six questions concerning the extent of district office involvement in decisions related to school level organization of instruction. For six items the modal responses from the two districts were distinctly different and for most items there was

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[1]Sahl. [2]See Stone; Burroughs; Claiborne.

[3]Hout, p. 85. [4]Sahl.

definite variation in the responses within the districts. The one exception was that each of the principals from the decentralized district agree that there was no district office involvement in determining if their school used individualized instruction.[1]

The study that has most specifically and directly investigated the question of intra-level consensus among principals is reported by Freeman and others. The principals of 150 schools in 25 different San Francisco Bay area districts served as "expert informants describing the educational programs carried on within their schools."[2] The question investigated was, "How much variation in answers of the principals in the sample is to be accounted for by working in a given district?"[3] The major findings were that for only about half of the variables did "variation among districts significantly account for variation among principals' responses" and, even if statistically significant, between-district variation "almost always accounted for a minor proportion of the variance in principal answers."[4] Only 14 to 25% of the variation in responses concerning the decision making level for personnel, major curriculum changes, and reading materials was accounted for by district.[5] The highest level of consensus was found with regard to total district influence or decisions:

> Despite the fact that consensus within districts is generally low, districts do seem to vary in the participation in and influence on decisions, as reported by principals. This variable shows a higher level of consensus (44% of the variation is accounted for by district) than any other such variable in the data.[6]

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[1]Marschak and Thomason, pp. 40-43. [2]Meyer et al., p. 238.

[3]Ibid., p. 243. [4]Ibid., p. 245. [5]Ibid., p. 244.

[6]Ibid., p. 247.

Intra-level consensus within school districts concerning autonomy has been identified as an important consideration in determining whether school site autonomy is appropriately to be considered as a characteristic of the organizational structure of school districts. Based upon the limited research findings which have been cited, intra-level consensus within school districts must be questioned and may not be assumed. On the other hand, higher degrees of consensus have been cited concerning authority available at the building level than concerning other issues. Overall these findings indicate a need for specific investigations of the extent to which the level of autonomy available at school sites is a matter of consensus or dissensus within school districts.

Relationship of Autonomy to Other Variables

The general problem toward which this research project is directed is the insufficiency of empirically verified knowledge variations in autonomy and the relationship of such variation to individual, organizational, or environmental variables. The research findings reported in the literature concerning the relationship of site autonomy to other variables are very limited and clearly fail to provide a knowledge base sufficient to answer questions of either theory or practice.

Some attempts have been made to find determinants of or predictor variables for levels of site or principal autonomy. Chrisman's study of Missouri principals reported that principals of larger schools and principals with greater administrative experience have less autonomy.[1]

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[1]Chrisman, p. 247.

A study reported by Craig investigated whether district average daily attendance, expenditure per student, resident occupational status, local tax rate, ethnic enrollment, tax election record, or teacher unionization could be considered as predictors of a district's adoption of site budgetary practices. The variables were not found to be determinants or predictors of site management budgeting practices.[1]

The relationships of autonomy to measures of efficiency, effectiveness, cost or output have received only limited investigation. Craig reported that adoption of site budgeting aspects of school-site management are associated with increased information flow, increases in administrative costs, and increases in teacher morale.[2] Hansen found that depending on the type of community, "some variation in student achievement can be accounted for by variations in principal effectiveness and autonomy."[3] Harris unsuccessfully attempted to find a relationship between principal autonomy and innovation at the elementary level.[4] Marschak and Thomason reported that increased autonomy for a local school is gained at the expense of more resources being devoted to "local expertise."[5]

Conclusions From the Review

Increasing the autonomy of individual school sites is a means of decentralizing the organizational structure of a school district.

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[1]Craig, pp. 11-12. [2]Ibid., p. 14.

[3]Hansen, p. 189.

[4]Richard C. Harris, "The Relationship Between Autonomy and Innovativeness Among Elementary School Principals" (Ph.D. dissertation, Cornell University, 1974), p. 38.

[5]Marschak and Thomason, p. 67.

The review of literature presented in this chapter has demonstrated that questions of centralization or decentralization have had a prominent place in the history of American education and that such questions are integrally related to fundamental political and social issues. Decentralization has also been pointed out as a matter of importance and yet uncertainty in terms of the overall structure of organizational control. If considered within the context established by this review, site autonomy decentralization proposals may be viewed as significant from a number of perspectives. Despite the significances of these plans, their educational and organizational implications have most often been assumed and not examined. Reported research related to school-site autonomy has been found to be extremely limited. The present research project is premised on the need for research of site autonomy.

If research related to site autonomy is to be conducted, the methodological issues identified in the literature for decentralization generally must be addressed. These include the appropriate conceptualization of decentralization, in this case unit autonomy, and the selection of appropriate choices concerning the use of institutional or questionnaire measures, objective or subjective measures, global or specific questions, and subscales or unitary measures.

If the presently limited knowledge base concerning site autonomy is to be expanded, an appropriate means of identifying differences in autonomy needs to be available and the range and dimensions of variations in autonomy to be accounted for need to be identified. The literature reviewed in this chapter gave some indication of the types of variations in autonomy that should be recognized. The findings with regard to implementation of site autonomy plans indicate that there are

differences in the extent to which individual school sites are autonomous. The extent of such differences and the decisions concerning which variations exist have not been well documented for districts generally. Also indicated is that autonomy varies from one area of decision making to another. The specific dimensions of such variation need to be empirically defined rather than assumed. The limited research available concerning intra-level consensus within districts indicates that consensus about autonomy may not be assumed to be present. The extent of intra-level consensus that does in fact exist has important implications for the selection of unit of analysis for research related to autonomy.

Increasing the level of school site autonomy as a form of decentralization has been presented as an issue of significance from historical, political, and organizational perspectives. Research findings to inform decision making with regard to the issue of site autonomy have been reported to be limited. Research concerning school site autonomy may be expected to proceed more effectively based upon a knowledge of the variations in autonomy that are to be accounted for and an efficient method of identifying such variation. The creation of such knowledge and the development, application, and analysis of such a method is the intent of the present research project.

CHAPTER III

METHODS AND PROCEDURES

Introduction

Chapter III presents a description of the research methods and procedures used in this study. The purpose of this research project is to inform and facilitate further research concerning school site autonomy by the development, application, and analysis of a method of identifying differences in the autonomy of school buildings or sites in a number of school districts. The discussion of methods and procedures will first address aspects of the project involved in the development of the method and then proceed to aspects related to application of the method and conclude with aspects of the study related to analysis.

Development

Development of a method of identifying differences in school site autonomy included: selection of mailed survey techniques, determination of appropriate respondents, and the construction and pilot testing of an instrument that reflected the concept of school site autonomy in structure and content.

Survey Technique

Differences in the autonomy of school sites within school districts might be identified in a variety of ways. Such different methods would require varying amounts of time and money. It was decided that if a survey instrument could be demonstrated to be an

effective means of gathering information about autonomy from different school districts, especially a large number of districts, significant time and expense might be saved in conducting future research involving autonomy. Whether or not such methods would be used in gathering information concerning other variables, an effective survey method of identifying autonomous sites could be expected to facilitate future research by identifying districts and schools that might then be studied using a variety of other techniques.

Respondents

A decision was necessary as to what person or persons within a given school district would be asked to respond to a survey instrument. A Florida study had asked district superintendents to provide information concerning whether certain types of decisions were made at the building level in their districts.[1] Such a method would be quite straight forward and efficient and superintendents could certainly be expected to be informed of district policies concerning the distribution of decision authority within their districts. On the other hand, superintendents are often a number of levels of hierarchy removed from the individual school sites in their districts. The accuracy of judgments as to decision authority actually exercised by persons several hierarchical levels removed might well be questioned.[2]

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[1] School Based Management.

[2] See Patchen, p. 47; Arnold S. Tannenbaum and Basil S. Georgopolos, "The Distribution of Control in Formal Organization," Social Forces 36 (October 1957):192.

The use of district level administrators as a group was decided against because of the difficulty of establishing any type of comparability across districts in terms of the number of levels or the rank and responsibility associated with different positions or job titles or the relationship of such positions to the operation of individual school sites.

It was decided that the principals of individual buildings would be appropriate persons to provide information concerning the extent of site autonomy. In the first place, such a decision allows for a degree of standardization or comparability across districts. The size and organization of individual school buildings or sites may vary extensively among and between districts, nevertheless, the individual school site, administered by a principal, is a commonly identifiable organizational subunit in school districts generally. Another reason for the decision to seek responses from principals is that the subunit level at which they operate is the organizational level to which the various site autonomy plans propose that decision making should be delegated. If site level personnel, especially the person organizationally designated to administer operations at the site, do not recognize a high degree of discretionary authority or autonomy with respect to a particular task or decision, it is not meaningful to speak of that site being autonomous in that respect. Recognition or perception of autonomy at the site level is a necessary, if not in fact sufficient, condition of the reality of autonomy. If autonomy is intended to allow greater adaptability of subunits, it is necessary that persons who are supposed to do the adapting, site level personnel, recognize some degree of autonomy. Principals may be understood as being in the best position to be aware

of site level decision authority with regard to a particular issue or decision. The responses of principals to a survey instrument concerning site autonomy may therefore be considered to be responses from expert informants.

Instrument

> Only after the conceptual boundaries . . . are spelled out should the measurement and operationalization become matters of concern. In other words, definition should guide measurement rather than available tools and psychometric limitations serve to delimit definition.[1]

School site autonomy has been defined as the extent to which decisions with respect to an individual school building or site are made specifically for that site independent of other schools in the district and are made by site level personnel at the individual school. Given this definition, decisions made specifically for individual school sites by site level personnel may be understood as indicants of the presence of site autonomy. An instrument to gather information about site autonomy might well consist of items describing particular decisions that are relevant to school sites and response options which provide the opportunity to indicate whether the particular decision presented by an item is one which is made specifically for an individual site and, if so, to what extent it is determined by persons at the individual site. The School Site Autonomy Inventory was developed for this research project based upon these concepts.

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[1]James and Jones, p. 1108.

Decision items

The number and variety of specific decisions that might have relevance to the operation of school sites is potentially unlimited. The specific decisions that were used as the basis of items for the survey instrument were gathered from the literature on school-site management and school-based management; the documents provided by a number of school districts which report having implemented administrative decentralization plans; instruments used in previous research projects which have addressed distribution of decision authority in school districts; the research literature of management and organizational theory related to decentralization; and other related sources encountered by the researcher. Throughout the process of review of the literature and formulation of the research project any particular decision or type of decision which was identified as possibly relevant was noted on a card. Several hundred such cards were accumulated.

The number of decision items which might be included in a survey instrument was obviously limited. Some decisions were eliminated because they were considered trivial or not sufficiently related to the concept of site autonomy. A number of the decisions on the cards were redundant.

In order that decisions related to various aspects of the concept of site autonomy might be included, the decisions on the cards were sorted into tentative categories of certified personnel, non-certified personnel, pupil personnel, curriculum and instruction, resource allocation (budget and finance), organization and administration, facilities and grounds, and other. These categories were neither assumed or intended to be discrete or exhaustive nor was it

assumed that such categories were in fact the dimensions along which autonomy would be empirically found to vary. The categories were used merely to provide some manageable basis for selection of decision items and as a means of insuring that different areas of decision making would be included. It was fully recognized that the process of selection of a limited number of specific decisions as the basis of instrument items would inevitably exclude important decisions and types of decisions from the study. The goal of the item selection and instrument construction process was to have a group of items which were plausibly representative of the types of decisions which are made with regard to a school site and concerning which the extent of site autonomy may be of some significance

The greatest difficulty encountered in the process of selecting decisions and phrasing items was the necessity of including items that were meaningful and significant at both elementary and secondary levels. Differences in the content and organization of instruction and in administrative practices at the two levels restricted the types of decisions that could be included. It was necessary to eliminate a number of items on this basis. The extent to which items included in fact have comparable meaning at the two levels remains in question for some items.

Form I

The first form of the School Site Autonomy Inventory was a compilation of 151 items. According to the directions for Form I respondents were first asked to determine whether in their district a particular decision was a "multiple site decision," made with respect to more than one school, or a "single site decision," made with respect to only one school site. If a decision was a single site decision

respondents were asked to indicate whom the decision was determined by on an eight point scale ranging from determined centrally without local participation to determined locally independent of any persons or groups above the building level.

Form I was reviewed by a number of students, teachers, and practitioners of educational administration. It was generally agreed that the number of items would need to be reduced and the directions for the response scale modified somewhat.

Form II

Based upon an analysis of the content and the wording of the 151 items for Form I in relationship to the concept of school site autonomy, 91 items were selected to be included in Form II. The response scale for Form II was similar to Form I except for minor wording changes and the use of seven response options instead of eight options used in Form I. Form II was the instrument used for the pilot study.

Pilot study

The purpose of the pilot study was to determine whether elementary and secondary principals from school sites in different districts and states would be willing and able to complete the Inventory and also to obtain comments and suggestions as to the clarity of directions, format, and item statements. The principals who were asked to participate in the pilot included 25 elementary principals involved in the project titled Training of Elementary Principals in Community Education sponsored jointly by the College of Education of Michigan State University, the Middle Cities Education Association, and the United States Office of Education; several elementary and secondary administrators

in Michigan who were acquaintances of the researcher; and a number of elementary and secondary principals from California and Wisconsin whose names and addresses were obtained from directory information. Prior to the pilot study a list of 100 districts had been randomly selected so that persons from districts which might be included in the larger study would not be included in the pilot. A total of 50 principals were asked to take part in the pilot. Completed Inventories were received from 23.

Based upon conversations with some of the pilot respondents, written responses received from others, and an analysis of all of the pilot data, several modifications were made in the format and directions for the Inventory.

In the first place the number of items was reduced from 91 to 72. Information with regard to the two aspects of autonomy was asked for in separate questions. The terms district and school were substituted for central and local and response options with regard to whom a decision is determined by were reduced from seven to five. The wording of a number of items was adjusted. In addition several items concerning budgeting which had been presented in a group in Form II were separated and rephrased to be presented independent of each other in Form III.

Form III

The responses and comments received during the pilot study were accepted as indication that the questions and items of the School Site Autonomy Inventory were meaningful for a variety of principals and that with the reduction of the number of items and the recommended adjustments in format and phrasing that one could anticipate being able to obtain the quantity and quality of data desired for the research

project. The School Site Autonomy Inventory-Form III was the instrument used to gather data for this study.[1]

Response options

As stated previously, the necessary condition of autonomy for an organizational subunit, such as a school site, is that decisions or activities of that subunit are independent of the decisions and activities of other subunits. Information as to whether or not this necessary condition was met with regard to any particular decision item was determined by obtaining responses to Question A of the Inventory:

> Consider whether in your district such a matter is decided specifically for one individual school rather than for some larger number or group of schools.
>
> CIRCLE NO if the item is decided for a group of schools and is not decided specifically for the single school site.
>
> CIRCLE YES if the item is decided specifically for the individual school site.

The second aspect of autonomy is a matter of degree, the extent to which a decision is determined by persons at an individual site or by some person or group above the building level in the district organization. Information with regard to this aspect of autonomy was based upon responses to Question B of the Inventory. Responses to Question B were considered relevant to the concept only when the response to

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[1] A copy of the instrument is found in Appendix B. It should be noted that development of the Inventory as a precise measurement tool was not the primary purpose of this research. The Inventory is more appropriately understood as a tentatively adopted tool for gathering empirical information about site autonomy's variation that will be useful in providing greater clarity concerning the concept and understanding of the extent, dimensions, and consistency of variations that are to be found. Based upon this information further development of a finely tuned measurement instrument might proceed more effectively.

Question A was YES.

Consider to what extent such a matter is determined or decided by the SCHOOL, i.e., by persons from the individual school building or site, or by the DISTRICT, i.e., by persons above the building level in the district organization.

CIRCLE THE NUMBER that indicates which of the categories below most appropriately describes how such an item is determined in your school district.

1	BY DISTRICT-SCHOOL NOT INVOLVED	Determined by persons above the building level in the district organization without participation or involvement from the individual school. (School may be informed of the decision.)
2	BY DISTRICT-SCHOOL INVOLVED OR CONSULTED	Determined primarily by persons above the building level with participation or involvement from, consultation with, and/or information provided by persons from the individual school.
3	JOINTLY BY DISTRICT AND SCHOOL	Determined jointly by district and school with persons from both the individual school and the district level actively involved in the shared decision process.
4	BY SCHOOL-DISTRICT INVOLVED OR CONSULTED	Determined primarily by persons at the individual school with participation or involvement from, consultation with, and/or information provided by persons from above the building level.
5	BY SCHOOL-DISTRICT NOT INVOLVED	Determined by persons at the individual school without participation or involvement from persons above the building level. (District may be informed of the decision.)

The combination of responses to Questions A and B resulted in a single scale of responses ranging from 0, the absence of autonomy due to the necessary condition of decision independency not having been met, to 5, a high level of autonomy. For purposes of this research the scale was accepted as sufficiently interval in nature to allow the use of means as a meaningful measure of central tendency and standard deviations as a measure of dispersion.

Inventory items

The 72 items included on Form III of the Inventory were identified as being associated with 12 categories or types of decisions. Throughout the development of the method decision categories were used in order to be able to reduce the number of decisions to a manageable number and yet include representative variety of decisions. The categories were in this sense tentative and not assumed to be consistent with dimensions of actual variation in autonomy.

The 12 categories and the decision items associated with each category are as follows:

Budget Determination

09 Determine what portion of the operational funds allocated to a site for the coming year will be budgeted for purchase of textbooks.

18 Determine what portion of the operational funds allocated to a site for the coming year will be budgeted for building maintenance and repair.

27 Determine what portion of the operational funds allocated to a site for the coming year will be budgeted for staff conference expenses.

31 Determine what portion of the operational funds allocated to a site for the coming year will be budgeted for purchase of equipment.

36 Determine amount of funds available during coming year for student field trips.

48 Add 30% to next year's budget for art supplies by reducing amounts budgeted for supplies for other subject areas.

Budget Administration

10 Transfer some unexpended funds from textbook budget to teaching supplies budget.

43 Transfer to science textbooks some unexpended social studies textbook funds.

49 Transfer some unexpended funds from administrator salaries to teacher salaries.

57 Transfer some unexpended funds from new equipment budget to library book budget.

63 Carry over at least part of a budget surplus to next year's building budget.

67 Transfer some unexpended funds from aide salaries budget to staff travel budget.

Allocation of Staff Resources

13 Not replace a teacher who has resigned and use equivalent funds to hire aides.

23 Decide to purchase a quantity of much needed physical education equipment during the coming year rather than replace a teacher who will be retiring.

25 Add a counselor for next year instead of replacing a teacher who is leaving.

47 Eliminate a library clerical aide position and add lunch period supervisors.

53 Increase number of full-time equivalent teachers for the coming year by reducing budget allocations in non-personnel areas.

61 When no vacancy is anticipated, eliminate a teaching position for the coming year and use the equivalent funds to hire several aides.

Selection and Assignment of Certified Personnel

01 From among final candidates, select person to fill a vacant teaching position.

22 Not accept a substitute teacher whose previous service has been unsatisfactory.

28 Select the person who will serve as principal of a building.

29 Exchange teaching assignments between two appropriately certified teachers (e.g., English and history or second and fourth grades).

41 Reject request for voluntary transfer to a site by a teacher from another site.

70 Determine areas of primary responsibility for an assistant principal.

Supervision of Certified Personnel

04 Place a written reprimand in the personnel file of a teacher observed using unwarranted corporal punishment.

08 Determine the subject and format of a three hour teacher inservice program.

11 Within general guidelines, establish specific criteria for teacher evaluations.

12 Send a teacher out-of-state to attend a two day instructional methods workshop.

21 Determine whether a first year teacher will be recommended to the board of education for continued employment or dismissal.

42 Decide if teachers are required to periodically submit lesson plans for review.

Non-certified Personnel

06 Obtain the dismissal of a teacher aide whose work is unsatisfactory.

26 Have an office secretary's regular working hours begin one half hour earlier.

38 From a number of final candidates, select person to fill a teacher aide vacancy.

44 Change custodians priority order for cleaning areas of a building.

52 Place a written reprimand in the personnel file of a food service employee observed violating established work rules.

62 Determine minimum typing speed required for a building office clerical position.

Organization of Instruction

02 Combine social studies and science into an interdisciplinary block program.

15 Modify basic organizational plan (e.g., flexible schedule, inter-age groups).

20 Decide to use month, quarter, semester, or year scheduling periods.

32 Organize or abandon a team teaching arrangement.

33 Use ability grouping of students for English or language arts instruction.

45 Within state time guidelines, schedule class periods and recess or break times.

Curriculum Content

16 Establish the sequence of content for math classes.

35 Decrease proportion of teaching time allocated to social studies and increase the time allocated to teaching math.

39 Change student learning objectives for geography classes.

51 Decide if current social issues will be the focus of social studies instruction.

56 Establish grade level reading achievement goals.

69 Alter an existing health program to include a new drug education unit.

Methods and Materials

05 Determine what library books will be purchased.

07 Adopt teaching strategy for a subject area (e.g., inquiry, mastery learning).

34 Decide if students may use electronic hand calculators in math class.

37 Adopt a program of individualized instruction in math classes.

46 Select a new set of science textbooks.

55 Select the basic series of books or materials to be used for reading program(s).

Supplies, Equipment and Services

50 Determine what maintenance and repair needs will receive priority attention.

54 Purchase video tape recording equipment.

59 Select the style of replacement furniture for several classrooms.

65 Buy a new set of maps of Latin America.

68 Obtain the services of a consultant, not on the district staff, to assist teachers in the development of content area reading skills.

71 Select brand X science lab supplies rather than brand Y used previously.

Student Affairs

14 Establish consequence or penalty for excessive student tardiness.

17 Determine what club or activity programs will be available to students.

60 Determine what behaviors are serious enough to cause a student to be temporarily removed from a class.

64 Adopt new standards for student dress and appearance.

66 Assign a student to a particular teacher or class.

72 Decide if students may leave the school grounds during lunch periods.

Parent/Community Relations

03 Decide whether to involve parents in selection process for assistant principal.

19 Determine how student progress will be reported to parents (letter grades, narratives, checklist, etc.).

24 Decide whether a parent or citizens advisory group will be involved in building level program planning and evaluation.

30 Include area citizens on an ad hoc committee to study school discipline.

40 Grant request of local community group for evening use of school building.

50 Circulate a monthly newsletter of local school events.

Summary of the Development of the Method

The method of gathering information that was developed for this research involved obtaining responses of school principals to the items included on the School Site Autonomy Inventory by means of a mailed survey. Principals were selected as the persons in the best position to provide valid information concerning the autonomy of sites. The structure and format of the School Site Autonomy Inventory were developed based upon the definition of the concept of school site autonomy used in this research. The items included in the Inventory were derived from the literature related to building or site-level decision authority and are presented as plausibly representative of the type of decisions identified in that literature. Mailed survey techniques were adopted as a reasonably efficient means of gathering information concerning site autonomy from a large number of school districts.

Application

The intent of the second stage of this project was to obtain data concerning the autonomy of school sites within a representative sample of school districts by the application of the method of identifying site autonomy that had been developed. The application of the method included: identification of the population of interest; selection of a sample of districts; identification of the site principals to be surveyed from each sample district; conducting of the mailed survey; and preparation of the data for analysis.

Population

Although the concept of school site autonomy has some degree of relevance for any school district having more than one school and a central administrative component, the concept has most often been associated with or proposed for school districts having some larger number of school sites. The number of individual schools in a district is largely a function of the total district enrollment. For this reason a basic feature defining the population studied in this project was that it was made up of United States public school districts having enrollments of more than 10,000 students as of Fall 1977. A rank ordered listing of such districts was obtained from the Education Directory, Public School Systems 1977-78.[1] In order that consistency of responses among and between elementary and secondary principals could be investigated a minimum of three responses from each level was established. In an attempt to be able to receive three responses at each level given a reasonable rate of return, districts were included only if they had at least four elementary and four secondary schools. Non-unified districts serving only elementary or high school students were not included in the study.

In order to main discreteness and comparability of categories, elementary school sites were defined as schools serving students in any grades kindergarten through six and not serving any grades seven or above. In like fashion, secondary sites were defined as schools serving students in any grades seven through twelve and no grades six or lower. For a school to be included in the study it had to be a

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[1]U.S. National Center for Educational Statistics, Education Directory, Public School Systems 1977-78 (Washington, DC: U.S. Government Printing Office, 1978), pp. 243-248.

general function school, a school which served a general student population. Schools that were identifiable as primarily providing special, alternative, continuing, or vocational education programs were not included. Special function schools were not always identifiable by name or other information provided by directories. Therefore, it may be assumed that some of the principals surveyed administered special function schools.

Given the limitations and requirements established, the population sampled for this study may be defined as United Stated unified public school districts which had 1977 Fall enrollments of 10,000 or more students and which included at least four general function elementary schools and four general function secondary schools.

Sample of Districts

The districts included in the sample were randomly selected from a numbered list of districts enrolling 10,000 or more students using a table of random numbers.[1] Originally a list of 100 districts was selected. It was necessary to determine whether a district originally selected was a unified district which included at least four elementary and four secondary general function schools. Information concerning the individual school sites within a particular district was obtained from the education directories for the various states included in the Microfiche College Catalog Collection 1978-79.[2] The names of individual schools, their addresses, grade levels served, and the names of the

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[1]Charles D. Hodgman, ed. C. R. C. Standard Mathematical Tables, 12th ed. (Cleveland, OH: Chemical Rubber Publishing Co., 1959), pp. 237-243.

[2]Microfiche College Catalog Collection 1978-79 (San Diego, CA: National Microfilm Library, 1978).

principals were generally available from these directories. Directories of many of the states also provided information concerning any special population served by a school. This information was most valuable in identifying special function schools.

The number of school districts to be surveyed was set at 50. Information concerning the number, grade levels, and type of schools within each district was examined in order until 50 districts meeting the established criteria were identified. The first 67 districts from the randomly selected list of 100 were considered before the 50 districts to be surveyed were determined. Two districts were eliminated because they were non-unified elementary districts. Two districts were eliminated because they were non-unified high school districts. Twelve districts were eliminated because they had less than four general function schools serving only grades seven through twelve. One district was eliminated because it had less than four general function elementary schools serving grades kindergarten through six only. This particular district had a large number of schools but used a K-8 structure for its elementary schools.

The final sample of 50 districts that were surveyed included districts from all parts of the country and from 26 different states. Eight of the districts were from California and four were from Virginia. Florida, Louisiana, Michigan, and Washington were each represented by three districts. One or two districts from 20 other states were surveyed.

The enrollment of the districts included ranged from 10,000 to 120,000. None of the nation's 15 largest districts, those having over 125,000 students, happened to be selected. The distribution of sample

districts by enrollment is presented in Table 3.1.

Table 3.1.--Summary of the enrollments of the 50 school districts

Enrollment	Frequency	Enrollment	Frequency
10,000 to 12,499	10	42,500 to 57,499	3
12,500 to 17,499	8	57,500 to 77,499	5
17,500 to 22,499	8	77,500 to 99,999	0
22,500 to 27,499	4	100,000 to 124,999	1
27,500 to 32,499	7	125,000 to 200,000	0
32,500 to 42,499	5	200,000 or greater	0

Although no specific provision was made for surveying districts reputed to have decentralized administrative structures, two of the districts included in the randomly selected sample were in fact districts which have national reputations for delegating a high degree of autonomy to individual school sites. Several other districts were reputed to be administratively decentralized but not necessarily in the form or to the extent of site autonomy. No statement can be made with regard to the inclusion of districts reputed to be highly centralized. Districts which use a more centralized structure or that are more restrictive of site level authority would be less apt to be specifically cited in the literature. Due to the fact that the 50 districts are a random sample of the population one can assume that the variations in autonomy reported by these districts was representative of the variation in autonomy in the population generally.

School Sites and Principals

The data for this study was gathered from a random sample of elementary and secondary principals from school sites within each of the randomly selected districts. The elementary and secondary populations of sites within each district were identified using the Microfiche College Catalog Collection 1978-79.[1] The number of school sites from each sample district which qualified as elementary or secondary schools for purposes of the study had been counted and recorded in the process of considering whether a given district could be included in the study. The decision was made to survey principals from up to 15 elementary and 15 secondary schools within a district. If 15 or less schools in a given category had been identified within a district, the principals from each of those schools were included as a potential respondent. In each case either the entire population or a representative sample of the population of principals from elementary and secondary general function school sites within the sample districts were selected to be surveyed.[2]

The number of elementary site principals selected to be included in the study from the 50 individual districts ranged from nine to fifteen. A total of 710 elementary principals were included in the study. The number of secondary site principals selected from the

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[1] Ibid.

[2] Information concerning the districts in the sample, their enrollments, the total number of school sites in each district, and the number of sites identified as elementary or secondary in each district is provided in Table C.1 in Appendix C. This table also indicates the number of principals who were asked to respond to the survey from each district along with the elementary, secondary, and total response and response percentages for each district.

individual districts ranged from the established minimum of four to the maximum of fifteen. The total number of secondary principals for all districts was 396. The combined number of principals, elementary and secondary, included in the study was 1,106 or an average of slightly more than 22 per district.

Conduct of the Survey

During the second week of February 1979, a mailing was sent to the principal of each of the 1,106 sites selected for the study. This mailing included a cover letter; a copy of the School Site Autonomy Inventory-Form III; the accompanying sheet of explanation, directions, and examples; and a business reply envelope. On March 12, 1979, a follow-up mailing was sent to non-responding principals.[1] During the first week of April individual letters were sent or phone calls were made to a number of principals whose districts had not yet provided the minimum of three usable responses from either the elementary or secondary levels. All principals were informed that their responses would be confidential and that individual schools or districts would not be identified in any report of the research. For this reason districts are identified by numbers only throughout this document. Necessary numbers of usable responses, at least three elementary and three secondary, were received from 48 (96%) of the 50 districts.[2] Overall, usable responses were received from 50.3% of the principals surveyed and from 51.1% of the principals from the 48 districts which were included in the data analysis.

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[1]The cover letters for the mailings are included in Appendix A.

[2]Information concerning the number and percentage of responses for individual districts is presented by Table C.1 in Appendix C.

Data Preparation

The returned Inventories were prepared for analysis by punching the response to each item on cards using 0 to indicate the answer NO to Question A and 1, 2, 3, 4, or 5 to indicate the answer to Question B in those cases where the answer to Question A was YES. A number 9 was used to indicate a missing or unidentifiable response. Also entered on the card for each respondent was the code indicating the district and the elementary or secondary site.

When the data from the 556 respondents had been transferred to cards, a 10% sample of 56 cards was drawn and the coding of the cards verified with the information on the Inventory returned by the individual respondent. A total of 4,032 separate coded responses were verified. The single error found was a case of a 4 punched instead of a 5. The accuracy rate in the verification sample was 99.98% which was accepted as sufficient indication that the data on the cards accurately represented the information provided by the respondents.

The cards that had been prepared served as the input for the analysis of the data which was carried out using the facilities of Michigan State University's Control Data Corporation 6500 computer and various subprograms of the Statistical Package for the Social Sciences.[1]

Analysis

An analysis of the data obtained by the application of the method developed for this project was carried out in an effort to answer the exploratory questions of the study. The analysis included examination of the extent, dimensions, and consistency of variations

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[1]Norman H. Nie et al., Statistical Package for the Social Sciences, 2nd ed. (New York: McGraw-Hill Book Co., 1975).

found in the data and of the degree to which school districts were empirically differentiated on the basis of the levels of site autonomy reported. The information provided by the analysis was presented in order to inform and facilitate further research, especially with regard to characteristics of variations in site autonomy that are to be accounted for and the adequacy of one method of gathering data concerning such variations.

Extent of Variation

The first aspect of the analysis was to examine the data to determine the extent of variation in site autonomy and to identify the individual items and types of decisions for which varying levels of autonomy were reported. The extent of variation in individual data and in the means of the responses aggregated for the 48 districts were both examined. The standard deviations of the total individual responses and the standard deviations of the means of the responses aggregated by districts were used as measures of the extent of variation or dispersion of the responses.

Dimensions of Variation

The issue of whether there are underlying dimensions in the variations of levels of site autonomy was examined based upon the results of factor analysis procedures using principal factoring with varimax orthogonal rotation using the 72 items as variables and the individual respondents as cases.[1] A second aspect of the examination of dimensions was to determine whether any factors or clusters of items identified were consistent with areas of administrative responsibility such as

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[1]Ibid., pp. 478-485.

those represented by the a priori decision categories used during development of the instrument for this project. This aspect of the analysis was carried out by a comparison of the a priori groupings of decisions with decision clusters extracted by factor analysis.

Consistency of Variation

The consistency of variations in autonomy was examined in order to provide information concerning the important methodological issue of the unit of analysis of which school site autonomy may appropriately be considered a characteristic. The issue was whether site autonomy should be addressed in future research as a characteristic of the organizational structure of the school district, i.e., a measure of the extent to which the district is administratively decentralized; or whether site autonomy is a characteristic which is specific to individual school sites, i.e., a feature of an individual site's relationship to the central district. The issue of unit of analysis was addressed based upon the consistency of responses among principals from individual districts. The premise upon which such an analysis is based is that, if site autonomy is to be considered a structural characteristic of the district, there should be a significant degree of consistency or consensus in the extent of autonomy reported by the principals from the various school sites within a district. The standard deviation of the responses for an item from a district was considered as a measure of the dispersion or absence of consensus for the item. A low standard deviation was accepted as indication of consensus and a high standard deviation as indication of the absence of consensus.

The issue of consistency of variation in site autonomy was also examined in terms of the degree of relative consistency, the portion of

the total variation in the responses that could be attributed to differences between districts. Within district standard deviations provided a measure of the presence or absence of consensus in an absolute sense. The correlation ratio, eta squared, η^2, was examined for each item as a measure of the portion of total variation explained by district differences, i.e., relative consistency.

Whether elementary or secondary responses within districts were more consistent than responses within districts generally and the extent to which elementary and secondary responses from districts were consistent with each other were also considered. In order to answer these questions the within district standard deviations for elementary principals and for secondary principals were compared with the within district standard deviations for the combined responses and the correlation ratios, η^2, for elementary district groups and secondary district groups were compared with correlation ratios for overall district groups. Pearson Correlation Coefficients, r, were computed as measures of the strength and direction of associations between elementary and secondary district means for the 72 decision items.

In order to gain information concerning the within district consistency of variations using multiple items scales rather than single item measures, several scales were constructed based upon the groupings of items identified by factor analysis. Correlation ratios for the scale values were examined and compared with the correlation ratios for the individual items.

Differentiation of Districts

The issue of whether there are differences between school districts in levels of overall site autonomy or average degrees of consensus about autonomy was addressed by comparing the means and distributions of the 72 item means and item standard deviations for the 48 districts. Relationship between levels of autonomy and degrees of consensus was examined based upon the strength and direction of correlation between measures of autonomy and measures of consensus.

Another way of addressing the issue of differentiation was to conduct a Q-type factor analysis in which the 48 districts were treated as the variables and the 72 items as the cases. The matrix of mean district responses for the 72 items was transposed and a principal factoring factor analysis with varimax orthogonal rotation was carried out on the transposed matrix of means. Any factors identified by the procedures were an indication of the extent to which districts were grouped based upon the district mean responses for the 72 items. The extent to which groups of districts could be identified by this procedure was an indication of the degree to which districts were differentiated.

Closely related to the question of differentiation and identification of districts having higher levels of site autonomy was the issue of whether principals from districts which have claimed or have been reported to be administratively decentralized in fact reported higher levels of site autonomy than principals from districts generally. In order to answer this question the district means for the reputedly decentralized districts were compared with the means of the other districts and the results of the Q-factoring were examined to determine

whether reputedly decentralized districts formed or were part of an identifiable cluster.

Summary of Methods and Procedures

The basic plan of this research project was to develop a method of gathering information concerning the autonomy of school sites within school districts; to apply that method in an effort to obtain data from a sample of school districts; to analyze the extent, dimensions, and consistency of variations in site autonomy; to appraise the extent to which the method provided an empirical basis for differentiating between districts in terms of site autonomy; and, by the accomplishment of the above, to inform and facilitate further research concerning school site autonomy. Mailed survey techniques with site principals as respondents were adopted as an appropriate means for data gathering. The format and items of the School Site Autonomy Inventory were presented as representative of the structure and substance of the concept of school site autonomy and the sample of districts and principals from school sites within districts were selected to be representative of the population being studied. Therefore, the variations in autonomy found within the data obtained are presented as representative of variations in site autonomy found in the population of school districts studied.

CHAPTER IV

ANALYSIS OF THE DATA

Introduction

In this chapter an analysis is presented of the extent, dimensions, and consistency of variations in levels of school site autonomy and of the degree to which school districts may be differentiated on the basis of the autonomy of their school sites. The following exploratory questions were investigated:

1. Do school principals report different levels of site autonomy and, if so, for which decisions are differences reported?

2. Do districts (i.e., principals from the same districts) report different levels of site autonomy and, if so, for which decisions are differences reported?

3. Are there identifiable clusters of decisions based upon variations in levels of site autonomy and are any such clusters congruent with areas of administrative responsibility?

4. Does the degree of consensus within districts justify consideration of school site autonomy as a district characteristic?

5. Is the degree of consensus among elementary principals or secondary principals within districts greater than the degree of consensus among principals within districts as a whole?

6. Are there differences among school districts in the overall levels of site autonomy or the average degrees of consensus about autonomy reported by principals?

7. Do principals from districts which have claimed to be decentralized report higher levels of school site autonomy than principals from districts generally?

The data presented and analyzed are based upon the responses to the 72 items of the School Site Autonomy Inventory obtained from 323 principals of elementary sites and 222 principals of secondary school sites from 48 school districts throughout the United States. The 72 items were examples of decisions that might commonly be made in school districts relevant to the operation and program of individual schools.

Principals' responses were coded on a scale from 0 to 5. If a principal indicated that, in his or her district, a particular decision was not made specifically for one school independent of other schools in the district, the response was coded as 0. If a principal indicated that the particular decision was made specifically for one school, the response was coded from 1 to 5 depending upon the extent to which the decision was determined by persons at or above the building level in the district organization. Decisions which were determined at the district level without the involvement of persons from the school site were coded as 1. Decisions which were determined by persons at the school site without the involvement of persons from above the site level were coded 5. Decisions made through joint participation of district and school personnel were coded as 3. The coding resulted in a single scale score of from 0 to 5 for each item with 0 indicating the absence of autonomy and 5 indicating extensive autonomy.

The presentation and analysis of data in this chapter depends extensively on the use of means as measures of central tendency and standard deviations as measures of dispersion. The value of the means presented throughout this chapter generally have meaning relative to the 0 to 5 scale used for responses, therefore no additional categorization of this measure was deemed necessary. To facilitate the

presentation and interpretation of information with regard to consensus or dispersion within the data, discussions of standard deviations will frequently be in terms of the ranges of values presented in Table 4.1.[1]

Table 4.1.--Value ranges for standard deviations with descriptions and abbreviations.

SD Value Range	Description	Abbreviation
0.00	Total Consensus	Tot. Con.
0.01 to 0.75	High Consensus	High Con.
0.76 to 1.50	Limited Consensus	Lmt. Con.
1.51 to 2.25	General Dispersion	Gen. Dis.
2.26 or more	Extreme Dispersion	Ext. Dis.

Extent of Variation

The first section of the analysis is intended to identify the decisions and types of decisions for which varying levels of autonomy were reported. The extent of variation in the individual responses from the total sample of principals is examined first. Also examined is variation in the means of the responses aggregated by districts.

Variation in Individual Responses

In order to facilitate analysis of the variation in the responses from the 545 individual principals two tables are presented. In Table 4.2 the 72 items are represented by abbreviated phrases used as item indicators and are grouped by the 12 decision categories used during the later stages of the development of the instrument. For each

[1]An explanation and discussion of the value range descriptions adopted is provided in Appendix D.

Table 4.2.--Item indicators, means, standard deviations, and relative frequencies of the responses of individual principals for 72 decision items grouped by 12 decision categories

Item	Item Indicator	Mean	SD	Relative Frequencies					
				0	1	2	3	4	5
Budget Determination									
09	portion of budget for textbooks	1.88	2.06	45.4	10.1	6.9	7.7	8.8	21.1
18	portion of budget for maintenance	0.77	1.26	64.7	13.0	10.4	6.9	2.8	2.2
27	portion of budget for conferences	1.56	2.00	56.1	6.7	3.9	6.9	11.4	15.1
31	portion of budget for equipment	2.31	2.07	36.9	6.3	7.8	11.1	13.5	24.3
36	funds for student field trips	1.87	2.14	50.0	6.4	5.4	6.6	8.1	23.6
48	shift supplies budget to art	2.84	2.25	34.4	3.6	2.4	6.0	11.0	42.6
Budget Administration									
10	textbook funds to supplies	1.91	2.12	49.6	5.2	3.9	7.6	13.1	20.5
43	science text funds to soc. studies	2.55	2.26	39.8	3.3	2.5	7.5	10.3	36.6
49	admin. salary funds to teachers	0.20	.64	87.4	8.6	1.5	1.5	0.8	0.2
57	equipment funds to library books	1.93	2.12	49.4	4.5	3.8	8.8	12.8	20.7
63	carryover building budget surplus	1.14	1.79	64.4	9.0	1.7	8.6	5.7	10.7
67	aide salary funds to staff travel	0.66	1.44	78.3	6.0	1.3	4.5	5.1	4.7
Allocation of Staff Resources									
13	not replace teacher, hire aides	1.33	1.67	56.8	3.9	6.7	19.0	9.7	3.9
23	not replace teacher, buy equipment	0.64	1.28	76.4	4.1	4.8	9.8	3.2	1.7
25	not replace teacher, add counselor	1.18	1.64	61.1	4.6	5.7	16.9	7.2	4.4
47	cut aide, add lunch supervisor	1.47	1.87	57.8	3.7	3.9	13.6	11.6	9.3
53	shift budget to increase teachers	0.53	1.15	78.0	7.5	3.4	7.2	2.8	1.1
61	eliminate teacher, hire aides	0.89	1.49	69.7	5.1	4.5	11.4	6.6	2.8
Selection and Assignment of Certified Personnel									
01	select teacher from finalists	2.79	1.53	16.1	2.8	14.2	29.4	27.9	9.6
22	not accept substitute teacher	3.92	1.51	8.8	1.3	3.4	12.1	25.0	49.9
28	selection of principal	0.70	0.94	52.9	31.8	9.9	3.7	1.1	0.6
29	exchange teaching assignments	3.70	1.60	11.8	0.9	3.0	16.0	26.7	41.6
41	reject teacher transfer request	2.06	1.64	31.2	6.8	12.7	29.5	14.0	5.9
70	responsibilities of asst. prin.	3.31	1.82	18.1	1.9	4.2	17.8	22.6	35.3

Table 4.2.--Continued

Item	Item Indicator	Mean	SD	Relative Frequencies					
				0	1	2	3	4	5
Supervision of Certified Personnel									
04	file reprimand of teacher	3.47	1.57	12.4	1.3	4.3	19.2	34.6	28.2
08	three hour inservice program	2.83	1.84	23.5	2.6	7.7	21.7	22.0	22.4
11	criteria for teacher evaluation	1.26	1.61	56.9	3.5	11.3	18.7	4.6	5.0
12	teacher to out-of-state workshop	2.34	1.69	29.1	2.1	8.4	33.4	20.0	7.1
21	first year teacher recommendation	3.47	1.29	7.5	0.4	4.3	32.9	35.1	19.8
42	teachers submit lesson plans	4.05	1.62	9.8	1.9	3.0	9.2	10.8	65.3
Non-certified Personnel									
06	dismissal of teacher aide	3.20	1.25	8.2	0.4	8.0	41.3	30.7	11.4
26	secretary's working hours	3.22	2.00	24.4	1.7	3.1	10.9	20.7	39.7
38	select teacher aide from finalists	3.39	1.61	12.2	3.2	6.0	19.7	29.8	29.1
44	custodians cleaning priority	3.80	1.70	12.0	2.2	3.6	11.8	17.2	53.3
52	food service employee reprimand	3.32	1.67	14.7	1.9	5.7	21.0	28.2	28.5
62	minimum typing speed for secretary	1.57	2.08	58.0	6.2	3.4	5.8	6.8	19.8
Organization of Instruction									
02	social studies/science block	1.99	1.99	47.1	0.8	3.4	16.7	19.5	12.6
15	modify basic organizational plan	3.16	1.62	17.0	0.6	3.5	24.6	36.9	17.4
20	length of scheduling periods	1.04	1.54	64.1	4.5	7.4	14.7	6.0	3.4
32	team teaching arrangement	3.92	1.45	8.6	0.7	1.1	15.6	27.4	46.6
33	ability grouping for language arts	3.79	1.56	10.7	1.1	1.9	15.7	22.5	44.1
45	schedule class periods and breaks	4.23	1.42	7.6	0.9	1.1	6.8	18.8	64.8
Curriculum Content									
16	sequence of content for math	2.14	1.87	38.4	0.7	8.9	25.0	13.9	13.0
35	time for social studies and math	1.92	2.02	48.0	2.6	4.1	16.0	13.6	15.8
39	geography learning objectives	2.71	1.96	29.7	1.3	4.4	20.8	20.5	23.3
51	focus of social studies instruction	2.67	1.97	30.9	1.3	3.4	21.5	20.0	22.8
56	grade reading achievement goals	2.42	1.87	32.3	0.8	8.3	26.5	15.9	16.3
69	new drug education unit	2.71	1.85	27.0	1.7	4.5	25.3	23.5	18.0

Table 4.2.--Continued

Item	Item Indicator	Mean	SD	Relative Frequencies					
				0	1	2	3	4	5
Instructional Methods and Materials									
05	library books to be purchased	3.77	1.61	11.2	1.1	3.9	12.5	25.4	45.9
07	teaching strategy for subject	3.41	1.67	14.2	0.4	6.3	19.6	27.1	32.1
34	hand calculators in math classes	3.92	1.61	10.9	1.1	1.9	12.0	19.6	54.4
37	math individualized instruction	3.70	1.50	10.3	0.4	2.4	18.9	31.7	36.2
46	select science textbooks	2.07	1.83	38.9	1.7	9.0	23.9	16.8	9.7
55	basic reading books and materials	2.23	1.83	35.3	1.1	7.5	28.9	15.6	11.6
Supplies, Equipment, and Services									
50	maintenance and repair priorities	2.28	1.61	24.9	5.6	16.1	31.1	14.2	8.1
54	purchase video tape recorder	3.32	1.75	16.3	1.7	6.3	19.3	22.7	33.7
59	style of replacement furniture	2.49	1.87	29.9	3.2	8.1	22.7	19.3	16.8
65	buy new set of maps	4.07	1.54	9.3	0.6	2.3	11.6	13.9	62.4
68	obtain consultant services	2.27	1.87	34.8	2.8	7.5	23.2	19.0	12.6
71	select brand of lab supplies	2.92	1.99	25.9	3.0	5.3	17.1	16.0	32.7
Student Affairs									
14	penalty for student tardiness	3.55	1.84	17.3	1.5	2.6	12.3	20.8	45.5
17	student club-activity program	4.09	1.51	9.2	0.7	1.7	8.2	20.7	59.4
60	student removed from class	3.91	1.54	9.6	0.9	2.8	13.2	21.9	51.4
64	student appearance standards	2.11	2.01	43.6	1.1	4.0	19.4	15.5	16.4
66	assign student to teacher or class	4.67	1.11	4.0	0.9	1.3	1.3	3.2	89.2
72	students leave school at lunch	2.79	2.14	32.4	2.4	4.3	10.7	15.3	34.8
Parent/Community Relations									
03	parents in on asst. prin. selection	0.88	1.54	70.4	5.4	6.2	6.8	6.4	4.9
19	student progress report method	1.43	1.66	52.9	2.4	10.5	21.1	9.1	4.1
24	citizens in program planning	2.53	1.91	29.7	3.7	7.3	22.0	17.7	19.6
30	citizens on discipline committee	3.10	1.88	21.1	2.8	5.1	18.6	21.1	31.4
40	community group use of building	2.95	1.68	17.2	3.4	9.8	27.0	21.7	20.8
58	circulate monthly newsletter	4.41	1.41	7.0	0.8	3.0	3.2	5.9	80.2

item in each of the groups, the overall mean, standard deviation, and relative frequency of responses for each level of the 0 to 5 scale is presented. Table 4.3 is composed of the 72 item indicators arranged in descending order of the standard deviations for the responses for each item. The items for which responses were most varied are those at the beginning of the list and the items for which there was the least variation are those toward the end of the list.

As indicated by the relative frequency distributions in Table 4.2, the responses for each of the 72 items cover the entire possible range from 0 to 5. Each response option was selected by at least one respondent for each item, yet the distributions of the responses for the items are distinctly different as indicated by the variations in the means and standard deviations. The items having the largest standard deviations were both related to some aspect of the budget process, 2.26 for item 43 and 2.25 for item 48. The extent of variation indicated by these measures borders between the ranges described as general and extreme dispersion. The next 58 items in Table 4.3 have standard deviations which fall in the range described as general dispersion. The standard deviation for 13 items falls in the limited consensus range and only the smallest standard deviation, 0.65 for item 49, is in the range which is described as high consensus.

The average unbiased standard deviation for the 72 items is 1.70 which is slightly less than the 1.71 standard deviation that would be computed for a rectangular distribution, equal number of responses in each of the six categories. For all the items considered together and for 80% of items considered separately, the individual responses from the total sample of principals are distributed across the six response

Table 4.3.--Item indicators and a descending array of standard deviations of the responses of individual principals for 72 items

Item	Item Indicator	SD	Item	Item Indicator	SD
43	science text funds to soc. studies	2.26	52	food service employee reprimand	1.67
48	shift supplies budget to art	2.25	13	not replace teacher, hire aides	1.67
72	students leave school at lunch	2.14	19	student progress report method	1.66
36	funds for student field trips	2.14	41	reject teacher transfer request	1.64
57	equipment funds to library books	2.12	25	not replace teacher add counselor	1.64
10	textbook funds to supplies	2.12	42	teachers submit lesson plans	1.62
62	minimum typying speed for secretary	2.08	15	modify basic organizational plan	1.62
31	portion of budget for equipment	2.07	34	hand calculators in math classes	1.61
09	portion of budget for textbooks	2.06	05	library books to be purchased	1.61
35	time for social studies and math	2.02	38	select teacher aide from finalists	1.61
64	student appearance standards	2.01	50	maintenance and repair priorities	1.61
26	secretary's working hours	2.00	11	criteria for teacher evaluation	1.61
27	portion of budget for conferences	2.00	29	exchange teaching assignments	1.60
71	select brand of lab supplies	1.99	04	file reprimand of teacher	1.57
02	social studies/science block	1.99	33	ability grouping for language arts	1.56
51	focus of social studies instruction	1.97	65	buy new set of maps	1.54
39	geography learning objectives	1.96	60	student removed from class	1.54
24	citizens in program planning	1.91	20	length of scheduling periods	1.54
30	citizens on discipline committee	1.88	03	parents in on asst. prin. selection	1.54
59	style of replacement furniture	1.87	01	select teacher from finalists	1.53
56	grade reading achievement goals	1.87	17	student club-activity program	1.51
68	obtain consultant services	1.87	22	not accept substitute teacher	1.51
16	sequence of content for math	1.87	37	math individualized instruction	1.50
47	cut aide, add lunch supervisor	1.87	61	eliminate teacher, hire aides	1.49
69	new drug education unit	1.85	32	team teaching arrangement	1.45
14	penalty for student tardiness	1.84	67	aide salary funds to staff travel	1.44
08	three hour inservice program	1.84	45	schedule class periods and breaks	1.42
55	basic reading books and materials	1.83	58	circulate monthly newsletter	1.41
46	select science textbooks	1.83	21	first year teacher recommendation	1.29
70	responsibilities of asst. prin.	1.82	23	not replace teacher, buy equipment	1.28
63	carryover building budget surplus	1.79	18	portion of budget for maintenance	1.26
54	purchase video tape recorder	1.75	06	dismissal of teacher aide	1.25
44	custodians cleaning priority	1.70	53	shift budget to increase teachers	1.15
12	teacher to out-of-state workshop	1.69	66	assign student to teacher or class	1.11
40	community group use of building	1.68	28	selection of principal	.94
07	teaching strategy for subject	1.67	49	admin. salary funds to teachers	.64

categories to an extent that could be described as general dispersion.

Although some degree of variation existed in the responses for each of the items, there were definite differences in the extent the responses varied. Differences in autonomy reported can be examined using the descending array of standard deviations presented in Table 4.3. Response variation can also be examined in terms of the 12 decision categories used to group items presented in Table 4.2. Summary information concerning the variation of responses in each of the decision categories is provided in Table 4.4.

The extent to which analysis based upon the 12 decision categories is meaningful is limited by the nature of the categories. In the first place, the categories are a priori rather than empirically derived, therefore consistency of variation for the items within a category has not been established and may not be assumed. An example of the variety that may exist within a category is that the Budget Administration category includes both the item which has the largest standard deviation, item 43, and the item which has the smallest standard deviation, item 49. The Pearson Correlation Coefficient for these items is only .13.

A second limitation of the categories is that they were neither intended nor assumed to be discrete but rather were adopted in an effort to insure some degree of variety in the content of the items included in the Inventory and to make the process of item selection and data presentation more manageable. Wide differences in the scope of the items included under the different categories also limits the validity of comparisons between them. Categories that deal with budget, personnel, and curriculum are rather specifically defined whereas the categories

Table 4.4.--Decision categories and averages, minimums, and maximums for the standard deviations of the category items

Decision Category	Average SD	Minimum SD	Maximum SD
Budget Determination	1.96	1.26	2.25
Curriculum Content	1.92	1.85	2.02
Supplies, Equipment, and Services	1.77	1.54	1.99
Budget Administration	1.72	0.64	2.26
Student Affairs	1.69	1.11	2.14
Parent/Community Relations	1.68	1.41	1.91
Instructional Methods and Materials	1.68	1.50	1.83
Organization of Instruction	1.60	1.42	1.99
Supervision of Certified Personnel	1.60	1.29	1.84
Non-certified Personnel	1.55	1.25	2.08
Allocation of Staff Resources	1.52	1.15	1.87
Selection and Assignment of Certified Personnel	1.51	0.94	1.82

dealing with supplies and services and public relations are made up of varieties of decision items that have only limited or indirect relationships to each other.

Despite the stated limitation of the categories used to group the items, a number of observations can be made with regard to the variability of autonomy reported for different types of decisions. The largest average standard deviation for any category is 1.96 for Budget Determination. With the exception of item 18, each of the items in this category has a standard deviation of 2.00 or larger. Three items in the Budget Administration category also have standard deviation larger than 2.00. An examination of Table 4.3 indicates that eight of the thirteen items for which the variation of individual responses are the largest are related to budgeting.

The category for which the average standard deviation for the items is the second largest is Curriculum Content. Each of the six items in this category has a standard deviation between 1.85 and 2.02 which is clearly the smallest range of item standard deviations for any of the categories.

The four categories for which the average standard deviations are the smallest are each related to personnel. Another indication of the low variability of responses for certain personnel decisions is that nine of the last thirteen items listed in Table 4.3, those with standard deviations less than 1.50, are in some way related to personnel. Just as budget related items were most prevalent among the items for which variation was the greatest, personnel related items are most prevalent among the items for which variation was the least.

For each of the items there was at least some degree of variation in level of autonomy reported by principals. For 80% of the items the standard deviations were in the range from 1.51 to 2.25 which is described as general dispersion. The average item standard deviation, 1.70, was also in this range. The items for which variation of response was the largest were most frequently decisions related to budget and the items for which variation of response was the smallest were most frequently decisions related to personnel. The primary point to be drawn from this initial analysis is that with the exception of a small number of items, variation in the level of autonomy reported by the individual principals concerning the various decisions exists.

Variation in Responses Aggregated by Districts

In the preceding section the extent of variation in site autonomy reported by individual principals was examined. The purpose of this section is to examine variation in the responses aggregated by districts. The responses of each of the principals were aggregated with the responses of each of the other principals from the same district. The means of the responses from each of the 48 districts for the 72 items provide the data presented in Table 4.5. The standard deviations of the district means is a measure of the extent of variation in aggregated data for the 72 items.

As would be expected the standard deviation of district means are generally smaller than the standard deviation for the individual data. The average standard deviation for the 72 items for individual data was 1.70. The average standard deviation for district means is 0.88. Although the range of district means for two items is as large as 4.92

Table 4.5.--Item indicators and a descending array of standard deviations of district means along with ranges, minimums, maximums, and frequency distributions of district means for 72 items (N = 48)

Item	Item Indicator	District Means					Freq. of Dist. Means[a]					
		SD	Range	Min.	Max.	Mean	0	1	2	3	4	5
43	science text funds to soc. studies	1.73	4.92	0.00	4.92	2.48	9	12	2	7	12	6
10	textbook funds to supplies	1.66	4.92	0.00	4.92	1.87	18	6	8	5	9	2
09	portion of budget for textbooks	1.58	4.70	0.00	4.70	1.82	13	15	4	4	9	3
48	shift supplies budget to art	1.57	4.64	0.13	4.77	2.78	7	6	5	12	10	8
57	equipment funds to library books	1.53	4.62	0.00	4.62	1.90	9	16	5	6	9	3
31	portion of budget for equipment	1.44	4.45	0.30	4.75	2.24	3	17	6	12	6	4
27	portion of budget for conferences	1.40	4.67	0.00	4.67	1.53	17	11	8	8	2	2
62	minimum typing speed for secretary	1.39	4.38	0.00	4.38	1.50	16	13	5	9	5	0
36	funds for student field trips	1.38	4.69	0.00	4.69	1.85	9	14	10	8	5	2
63	carryover building budget surplus	1.29	4.62	0.00	4.62	1.09	26	9	6	3	2	2
38	select teacher aide from finalists	1.15	4.75	0.13	4.88	3.35	1	4	5	11	22	5
46	select science textbooks	1.15	3.93	0.30	4.23	2.01	2	18	12	8	8	0
55	basic reading books and materials	1.12	4.49	0.20	4.69	2.13	2	14	15	10	6	1
35	time for social studies and math	1.07	4.75	0.10	4.85	1.87	5	13	16	12	1	1
13	not replace teacher, hire aides	1.06	4.15	0.00	4.15	1.24	13	22	7	3	3	0
72	students leave school at lunch	1.06	3.58	1.00	4.58	2.79	0	7	15	12	13	1
68	obtain consultant services	1.02	3.73	0.50	4.32	2.19	1	13	16	11	7	0
71	select brand of lab supplies	1.02	3.85	0.90	4.75	2.92	0	3	16	15	12	2
40	community group use of building	0.99	4.25	0.50	4.75	2.91	1	2	20	10	12	3
01	select teacher from finalists	0.98	3.96	0.13	4.08	2.74	1	4	14	15	14	0
59	style of replacement furniture	0.98	4.14	0.50	4.64	2.49	1	7	20	11	8	1
64	student appearance standards	0.97	3.90	0.50	4.40	2.10	2	13	18	10	5	0
03	parents in on asst. prin. selection	0.96	3.25	0.00	3.25	0.85	25	13	4	6	0	0
47	cut aide, add lunch supervisor	0.96	4.08	0.00	4.08	1.40	11	18	12	6	1	0
12	teacher to out-of-state workshop	0.94	4.38	0.25	4.63	2.31	1	8	18	16	4	1
44	custodians cleaning priority	0.94	3.40	1.60	5.00	3.80	0	0	5	12	18	13
02	social studies/science block	0.92	4.62	0.00	4.62	1.90	5	14	18	9	1	1
30	citizens on discipline committee	0.91	3.46	1.17	4.63	3.08	0	2	12	17	14	3
08	three hour inservice program	0.90	3.17	1.25	4.42	2.74	0	6	13	21	8	0
26	secretary's working hours	0.90	3.36	1.38	4.73	3.14	0	1	14	14	18	1
54	purchase video tape recorder	0.89	4.43	0.40	4.83	3.29	1	1	7	17	20	2
14	penalty for student tardiness	0.88	4.65	0.27	4.92	3.54	1	1	2	15	25	4
67	aide salary funds to staff travel	0.88	4.31	0.00	4.31	0.63	34	8	4	0	2	0
19	student progress report method	0.87	3.76	0.10	3.86	1.39	4	27	12	3	2	0
69	new drug education unit	0.87	3.39	1.15	4.54	2.66	0	6	16	16	9	1
16	sequence of content for math	0.86	4.30	0.36	4.67	2.12	2	9	21	14	1	1

Table 4.5.--Continued

Item	Item Indicator	District Means					Freq. of Dist. Means[a]					
		SD	Range	Min.	Max.	Mean	0	1	2	3	4	5
39	geography learning objectives	0.86	3.80	1.20	5.00	2.69	0	4	19	18	6	1
51	focus of social studies instruction	0.86	3.68	1.89	4.77	2.62	0	7	14	20	6	1
56	grade reading achievement goals	0.86	4.58	0.17	4.75	2.39	1	6	19	18	3	1
05	library books to be purchased	0.83	3.11	1.80	4.91	3.74	0	0	4	8	28	8
41	reject teacher transfer request	0.83	3.30	0.25	3.55	2.03	2	12	19	14	1	0
25	not replace teacher, add counselor	0.81	3.77	0.00	3.77	1.12	14	22	9	2	1	0
24	citizens in program planning	0.80	3.19	1.22	4.42	2.50	0	3	24	14	7	0
65	buy new set of maps	0.76	2.75	2.25	5.00	4.04	0	0	3	11	17	17
61	eliminate teacher, hire aides	0.74	3.00	0.00	3.00	0.85	23	17	6	2	0	0
52	food service employee reprimand	0.73	3.23	1.40	4.63	3.29	0	1	5	24	17	1
70	responsibilities of asst. prin.	0.73	3.30	1.33	4.62	3.27	0	1	5	22	19	1
42	teachers submit lesson plans	0.72	3.40	1.60	5.00	4.00	0	0	3	7	27	11
20	length of scheduling periods	0.71	3.80	0.00	3.80	1.02	13	26	8	0	1	0
34	hand calculators in math classes	0.71	4.00	1.00	4.00	3.88	0	1	1	9	31	6
07	teaching strategy for subject	0.68	3.07	1.70	4.77	3.35	0	0	4	23	20	1
15	modify basic organizational plan	0.66	3.10	1.50	4.60	3.11	0	1	9	23	14	1
11	criteria for teacher evaluation	0.65	2.75	0.10	2.85	1.23	8	26	11	3	0	0
17	student club-activity program	0.65	3.55	1.25	4.80	4.03	0	1	1	5	32	9
22	not accept substitute teacher	0.62	2.33	2.44	4.77	3.89	0	0	1	12	28	7
33	ability grouping for language arts	0.62	2.62	2.30	4.92	3.78	0	0	1	16	27	4
06	dismissal of teacher aide	0.60	2.83	1.67	4.50	3.18	0	0	5	30	13	0
50	maintenance and repair priorities	0.60	2.91	0.80	2.71	2.27	0	4	26	17	1	0
04	file reprimand of teacher	0.59	3.06	1.44	4.50	3.46	0	1	2	23	22	0
23	not replace teacher, buy equipment	0.59	2.92	0.00	2.92	0.62	27	18	2	[a]1	0	0
29	exchange teaching assignments	0.59	2.53	2.17	4.75	3.64	0	0	2	18	25	3
32	team teaching arrangement	0.57	2.55	2.30	4.85	3.90	0	0	1	8	34	5
21	first year teacher recommendation	0.56	3.20	1.30	4.50	3.45	0	1	0	25	22	0
60	student removed from class	0.56	2.24	2.53	4.77	3.89	0	0	0	12	31	5
45	schedule class periods and breaks	0.55	3.43	1.44	4.88	4.20	0	1	0	3	33	11
18	portion of budget for maintenance	0.54	2.13	0.13	2.25	0.76	20	22	6	0	0	0
37	math individualized instruction	0.54	2.68	2.18	4.85	3.67	0	0	1	16	30	1
53	shift budget to increase teachers	0.53	2.90	0.00	2.91	0.53	31	15	1	1	0	0
58	circulate monthly newsletter	0.45	1.92	3.08	5.00	4.40	0	0	0	1	27	20
28	selection of principal	0.41	1.69	0.18	1.88	0.70	18	26	4	0	0	0
66	assign student to teacher or class	0.33	1.15	3.85	5.00	4.67	0	0	0	0	16	32
49	admin. salary funds to teachers	0.24	1.20	0.00	1.20	0.20	44	4	0	0	0	0

[a]Frequencies of district means rounded to nearest integer.

it is as small as 1.15 for another item. For 55 of the 72 items the range of district means is 3.00 or greater. For individual data 5.00 was the range of response for each item. Although the extent of variation among district means is reduced compared to the range of variation for individual data, one would conclude that the extent of variation in autonomy for most of the items continues to be substantial even when responses are aggregated by district.

Examination of the frequency distributions of district means rounded to the nearest integer evidences that for many of the items the means are grouped toward one end of the scale or the other. This is increasingly true as the standard deviations become smaller. Of particular importance for purposes of this research is the fact that for most items there are district means that deviate from the groupings. The extent of variation is also evidenced by the range of the means.

Just as was true for the individual data, those items which evidence the greatest variation in district means are most frequently decision items related to budget. Nine of the first ten items in Table 4.5 are from the Budget Determination or Budget Administration categories. A number of the personnel related decision items which evidenced the least variability for individual data can also be found to have the smallest standard deviations of district means. The Pearson Correlation Coefficient between the standard deviations of the individual data and the standard deviations of the district means for the 72 items is .820. In other words there was a high degree of consistency between the extent of variation for an item on the two levels of analysis. The range of the scale covered by individual responses or district means justifies the conclusion that for most of the items

differences in site autonomy reported are substantial and justify further investigation of variations.

Dimensions of Variation

The question addressed by this section of the analysis is whether there are identifiable clusters of decisions based upon variations in levels of site autonomy and whether any such clusters are congruent with areas of administrative responsibility. Underlying patterns of intercorrelation in the variations in autonomy reported for the 72 decision items were examined using the data reduction techniques of factor analysis. The data analyzed in this section is the individual responses of the 545 principals from the 48 districts. The factor analysis procedures used were principal factoring with iteration and varimax orthogonal rotation provided by the subprogram FACTOR of the Statistical Package for the Social Sciences.[1]

Factor Analysis

The initial factor analysis procedure extracted 16 principal factors with eigenvalues of 1.00 or greater which together accounted for 58.7% of the total variance. The principal factors were varimax rotated and examined for items clearly identifiable with any of the 16 factors. An item was accepted as identifiable with a given factor when the loading of the item on the factor was .400 or more and at least .200 greater than the loading of that item on any other factor. Five of the sixteen factors were found to have three or more items clearly identifiable with them.

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[1]Nie et al., pp. 480-487.

Factors defined

Based upon the preceeding findings a second factor analysis of the data was carried out. The number of factors to be extracted was set at five using the NFACTORS parameter of the subprogram FACTOR. The factor matrix extracted was again the result of principal factoring with orthogonal varimax rotation and is presented as Table E.1 in Appendix E. The rotated matrix was examined in terms of the items which were clearly identifiable with each of the five factors. Clearly identifiable was again taken to mean a loading of .400 or more on a particular factor and .200 or more than the loading on any of the other factors. An exception to this decision rule was made in the case of item 38 which loaded significantly on the first as well as the fifth factor.

General Dimension

The first factor extracted may be described as a general factor in that the 20 items determined to be clearly identifiable with the factor represent a variety of different types of decisions. Table 4.6 presents items identifiable with Factor 1 and the loading of the items on the factor. The general nature of this factor is evidenced by the fact that the 20 items were from eight of the twelve original decision categories. Another feature of the group is that 15 of the 20 items are among the lower half of the items in terms of variability as indicated by items standard deviations in Table 4.3. Factor 1 is therefore described as a factor with which a variety of mostly low variation items are identifiable. This group of items will be considered as the General Dimension.

Table 4.6.--Item indicators and factor loadings of decision items identifiable with Factor 1 - General Dimension

Item	Item Indicator	Loading
66	assign student to teacher or class	.783
32	team teaching arrangement	.700
58	circulate monthly newsletter	.668
17	student club-activity program	.649
34	hand calculators in math classes	.622
45	schedule class periods and breaks	.614
29	exchange teaching assignments	.596
37	math individualized instruction	.584
42	teachers submit lesson plans	.578
22	not accept substitute teacher	.577
33	ability grouping for language arts	.571
65	buy new set of maps	.570
60	student removed from class	.542
30	citizens on discipline committee	.477
26	secretary's working hours	.449
05	library books to be purchased	.442
04	file reprimand of teacher	.439
44	custodians cleaning priorities	.435
70	responsibilities of asst. prin.	.410
14	penalty for student tardiness	.402

Budget Dimension

The eight items which were identifiable with Factor 2 were all budget decisions, four from the Budget Determination category and four from the Budget Administration category. These items and their loadings are presented in Table 4.7. The items are generally characterized by extensive variation of responses. The overall standard deviation for each of the items was above the average for all items of 1.70 and five of the six were among thirteen items which have standard deviations of 2.00 or larger. The items identifiable with factor 2 are taken as describing a Budget Dimension.

Staff Resource Flexibility Dimension

The eight items identifiable with Factor 3 are presented in Table 4.8 and each is in some way related to flexibility or discretion in the allocation of staff resources. Each of the six items from the original category Allocation of Staff Resources is identified with Factor 3. Two additional items, number 49 and 67 which involve the transfer of funds budgeted for salaries, are also identifiable with the factor. With the exception of item 47, the items in the group are low variability items in that the standard deviation of the response for the items are smaller than for items generally. The grouping of items identified by Factor 3 will be considered as the Staff Resource Flexibility Dimension.

Curriculum Content and Materials Dimension

Five items identifiable with Factor 4 are presented in Table 4.9. These items are from the original Curriculum Content or Instructional Methods and Materials category. The items in this group are items for

Table 4.7.--Item indicators and factor loadings of decision items identifiable with Factor 2 - Budget Dimension

Item	Item Indicator	Loading
10	textbook funds to supplies	.772
09	portion of budget for textbooks	.736
43	science text funds to soc. studies	.702
57	equipment funds to library books	.696
31	portion of budget for equipment	.649
48	shift supplies budget to art	.584
27	portion of budget for conferences	.574
63	carryover budget surplus	.448

Table 4.8.--Item indicators and factor loadings of decision items identifiable with Factor 3 - Staff Resource Flexibility Dimension.

Item	Item Indicator	Loading
23	not replace teacher, buy equipment	.683
25	not replace teacher, add counselor	.680
61	eliminate teacher, hire aides	.644
53	shift budget to increase teachers	.633
13	not replace teacher, hire aides	.574
67	aide salary funds to staff travel	.557
47	cut aide, add lunch supervisor	.529
49	admin. salary funds to teachers	.505

which there is comparatively high variation in the degree of autonomy reported by individual principals. Each of the items has a standard deviation larger than the all item average of 1.70. The group of items identifiable with Factor 4 will be considered as the Curriculum Content and Materials Dimension.

Instructional Personnel Selection Dimension

Based upon the established decision criteria, items 01 and 41 were accepted as identifiable with Factor 5. A third item, number 38, loaded strongly on both Factor 5 and Factor 1. Due to its primary loading of .464 on Factor 5 and its relationship to the content of the other two items, item 38 was accepted as identifiable with Factor 5 and considered part of an Instructional Personnel Selection Dimension. The extent of variation for each of the three items is below the average for all items. The items which defined the Instructional Personnel Selection Dimension are presented in Table 4.10.

Multidimensionality

The purpose of the factor analysis was to determine whether there were identifiable clusters of decisions based upon underlying patterns of intercorrelation in variations in site autonomy for the 72 decision items. If no factors had been extracted the individual items would have been shown to vary independent of each other. The identification of one overall factor or cluster would have indicated that variations in site autonomy may be considered as unidimensional. The result of the factor analysis procedures was the extraction of a number of mathematically independent, orthogonal, factors which were demonstrated to be definable dimensions of variation based upon an examination of the

Table 4.9.--Item indicators and factor loadings of decision items identifiable with Factor 4 - Curriculum Content and Materials Dimension

Item	Item Indicator	Loading
55	basic reading books and materials	.602
46	select science textbooks	.552
39	geography learning objectives	.495
16	sequence of content for math	.458
56	grade level achievement goals	.454

Table 4.10.--Item indicators and factor loadings of decision items identifiable with Factor 5 - Instructional Personnel Selection Dimension

Item	Item Indicator	Loading
01	select teacher from finalists	.539
41	reject teacher transfer request	.506
38	select teacher aide from finalists	.464

content of the decision items identifiable with each of the factors. Variations in school site autonomy may therefore appropriately be considered to be multidimensional. The dimensions identified by the present analysis should not be assumed to be exhaustive of the dimensions of variations in school site autonomy but rather should be viewed as evidence of the presence of dimensionality and as an indication of some of the dimensions that should be accounted for by future research in addition to other dimensions that are empirically derived.

Administrative Areas

A second aspect of the issue of dimensionality was whether any identifiable clusters of decisions were congruent with areas of administrative responsibility such as those represented by the a priori decision categories used during development of the instrument. Figure 4.1 presents a comparison of the original decision category groups and the groups based upon the five dimensions identified by factor analysis. The four specifically defined dimensions of Budget, Staff Resources Flexibility, Curriculum Content and Materials, and Instructional Personnel Selection are each made up of items from two categories. The 20 items of the General Dimension are from eight of the original categories, mostly from those categories from which the four more specific dimensions did not include items.

The original categories were not totally consistent with the dimensions yet the dimensions identified by the factor analysis were understandable in terms of the original categories. The specific divisions or groups used for the original categories were arbitrary and one would not expect them to be totally consistent with the empirically defined dimensions. On the other hand, the fact that the dimensions

CATEGORY	DECISION ITEM NUMBER	DIMENSION
Budget Determination	18 36	9 27 31 48
Budget		10 43 57 63 — FACTOR 2 BUDGET
Administration		49 67
Allocation of Staff Resources		13 23 25 47 53 61 — FACTOR 3 STAFF RESOURCES FLEXIBILITY
Selection and Assignment of Certified Personnel	28	22 29 70
Non-certified Personnel	6 52 62	26 44
		1 41 38 — FACTOR 5 INSTRUCTIONAL PERSONNEL SELECTION
Supervision of Certified Personnel	8 11 12 21	4 42
Organization of Instruction	2 15 20	32 33 45
Parent/Community Relations	3 19 23 40	30 58
Student Affairs	64 73	14 17 60 66
Supplies, Equipment, and Services	50 54 59 68 71	65
Methods and Materials	7	5 34 37 45 55
Curriculum Content	35 51 69	16 39 56 — FACTOR 4 CURRICULUM CONTENT AND MATERIALS
		FACTOR 1 GENERAL

Figure 4.1.--A comparison of item groupings for original decision categories with dimensions identified by factor analysis

which are superimposed over the original groupings can be presented, with only limited exceptions, as non-overlapping is a demonstration of a degree of consistency between the a priori categories and the empirically derived dimensions.

Further research related to site autonomy should, to the extent possible, proceed based upon empirically derived or validated dimensions but the type of a priori categories often employed may be found to be not too dissimilar from the derived dimensions. In addition, dimensions of variation in school site autonomy may be expected to be understandable or explainable in terms of areas of administrative responsibility such as budget, personnel, and curriculum even though the two types of grouping may not be totally congruent. It remains a matter for empirical investigation which combinations or subdivisions of administrative areas might most appropriately be used to define dimensions of variations in school site autonomy.

Consistency

In this section of the analysis, data concerning the consistency of site autonomy within school districts is examined. The primary question addressed is whether school site autonomy is a characteristic concerning which there is consensus among principals from school sites within districts. The issue of consistency derived its importance from the premise that if school site autonomy is to be considered as a characteristic of the organizational structure of school districts, there should be a significant degree of consistency or consensus in the extent of autonomy reported by principals from different sites within districts. It has been argued that only if site autonomy or specific dimensions of site autonomy can be empirically demonstrated

to be characteristics of the organizational structure of school districts should districts be adopted as the unit of analysis for further research investigation of the determinants, correlates, and possible organizational or educational effects of varying levels of site autonomy.

Presented first is an examination of consistency or consensus in an absolute sense, i.e., absence of difference or lack of dispersion among the responses from within districts. Secondly consistency is examined from a relative perspective, i.e., portion of total variation explained by differences between districts. Thirdly, the issue of consistency is examined in terms of the extent to which within district consistency is increased by consideration of elementary and secondary principals separately and whether elementary and secondary responses within districts are consistent with each other. Also examined is the relative consistency of within district responses using multiple item measures of autonomy.

Within District Consensus

The degree of consensus within school districts concerning the level of site autonomy for a decision item is indicated by the standard deviation of the district responses for that item. The mean of the standard deviations for the 48 districts provides an aggregate measure of within district consensus for an item. Table 4.11 presents the means of the district standard deviations for the 72 items along with distributions of the frequencies for each of the standard deviation value ranges.

The means of district standard deviations for the 72 items range from 0.44 to 1.89. Forty-four of the means fall in the range described

Table 4.11.--Item indicators and an ascending array of means with frequency distribution for within district standard deviations for 72 items (N = 48)

Item	Item Indicator	Mean Dist. SD	Frequencies				
			Tot. Con.	High Con.	Lmt. Con.	Gen. Dis.	Ext. Dis.
49	admin. salary funds to teachers	0.44	13	27	7	1	0
28	selection of principal	0.82	0	23	23	2	0
66	assign student to teacher or class	0.83	15	8	15	10	0
53	shift budget to increase teachers	0.91	5	15	20	8	0
67	aide salary funds to staff travel	0.93	5	18	13	11	1
03	parents in on asst. prin. selection	1.03	9	8	16	14	1
23	not replace teacher, buy equipment	1.04	3	7	31	6	1
63	carryover building budget surplus	1.06	5	12	16	15	0
18	portion of budget for maintenance	1.07	0	16	22	10	0
06	dismissal of teacher aide	1.12	0	11	27	10	0
38	select teacher aide from finalists	1.14	0	14	18	16	0
21	first year teacher recommendation	1.17	0	5	32	11	0
61	eliminate teacher, hire aides	1.19	2	10	20	15	1
10	textbook funds to supplies	1.20	3	9	17	17	2
01	select teacher from finalists	1.20	0	10	26	12	0
58	circulate monthly newsletter	1.23	5	7	17	18	1
13	not replace teacher, hire aides	1.24	2	5	26	15	0
09	portion of budget for textbooks	1.27	1	5	23	19	0
65	buy new set of maps	1.27	2	10	16	18	2
45	schedule class periods and breaks	1.28	0	9	25	12	2
27	portion of budget for conferences	1.32	3	11	9	22	3
20	length of scheduling periods	1.33	2	4	22	20	0
32	team teaching arrangement	1.33	0	7	19	22	0
44	custodians cleaning priority	1.35	1	8	16	22	1
05	library books to be purchased	1.37	0	10	15	22	1
22	not accept substitute teacher	1.37	0	8	18	20	2
57	equipment funds to library books	1.38	2	7	15	21	3
25	not replace teacher, add counselor	1.38	1	6	20	21	0
43	science text funds to soc. studies	1.39	1	11	13	18	5
33	ability grouping for language arts	1.39	0	6	22	20	0
62	minimum typing speed for secretary	1.40	4	7	11	20	6
40	community group use of building	1.40	0	5	20	23	0
17	student club-activity program	1.40	0	8	18	20	2
37	math individualized instruction	1.40	0	7	20	21	0
19	student progress report method	1.42	0	3	23	22	0
34	hand calculators in math classes	1.43	2	3	22	19	2
60	student removed from class	1.43	0	7	15	25	1
12	teacher to out-of-state workshop	1.44	0	3	24	21	0
41	reject teacher transfer request	1.45	0	2	22	24	0
42	teachers submit lesson plans	1.46	1	6	16	25	0
11	criteria for teacher evaluation	1.46	0	2	21	25	0

Table 4.11.--Continued

Item	Item Indicator	Mean Dist. SD	Frequencies				
			Tot. Con.	High Con.	Lmt. Con.	Gen. Dis.	Ext. Dis.
46	select science textbooks	1.47	0	1	22	25	0
04	file reprimand of teacher	1.47	0	4	15	22	1
55	basic reading books and materials	1.48	0	3	19	26	0
31	portion of budget for equipment	1.48	0	5	18	25	0
54	purchase video tape recorder	1.51	0	4	20	22	2
15	modify basic organizational plan	1.51	0	5	15	27	1
52	food service employee reprimand	1.53	0	3	16	29	0
50	maintenance and repair priorities	1.54	0	0	19	29	0
29	exchange teaching assignments	1.54	0	3	14	28	3
47	cut aide, add lunch supervisor	1.55	1	3	15	27	2
07	teaching strategy for subject	1.56	0	2	17	27	2
36	funds for student field trips	1.58	1	7	10	24	6
48	shift supplies budget to art	1.58	0	9	12	14	13
68	obtain consultant services	1.60	0	0	16	32	0
59	style of replacement furniture	1.61	0	3	13	32	0
14	penalty for student tardiness	1.62	0	4	13	28	3
30	citizens on discipline committee	1.67	0	3	9	34	2
69	new drug education unit	1.67	0	2	11	35	0
08	three hour inservice program	1.68	0	1	12	34	1
56	grade reading achievement goals	1.70	0	2	6	38	2
16	sequence of content for math	1.70	0	1	11	35	1
35	time for social studies and math	1.72	0	4	9	31	4
70	responsibilities of asst. prin.	1.72	0	1	11	34	2
71	select brand of lab supplies	1.73	0	1	12	32	3
02	social studies/science block	1.79	1	1	5	37	4
24	citizens in program planning	1.79	0	1	6	41	0
39	geography learning objectives	1.80	1	0	3	40	3
64	student appearance standards	1.81	0	1	4	41	2
51	focus of social studies instruction	1.82	0	2	3	42	1
26	secretary's working hours	1.86	0	3	4	38	3
72	students leave school at lunch	1.89	0	2	5	33	8

as limited consensus, 27 are in the range described as general dispersion, and the smallest mean standard deviation for an item is in the range described as high consensus. The mean of the 72 means is 1.41 which is in the upper portion of the limited consensus range. For 71 of the aggregated measures of within district consensus are spread quite consistently over a range from 0.82 to 1.89. The value for item 49, 0.44 is distinctly deviant.

The primary point to be drawn from the frequency distributions presented in Table 4.11 is that the degree of consensus, the values of the districts' standard deviations, evidence definite variation among the districts for nearly all of the items. Although the means of the district standard deviation differ from item to item, the standard deviations for the individual districts extend at least into both the high consensus and general dispersion ranges in each case except items 50 and 68. Items for which the mean of the district standard deviations are comparatively small, have individual district measures in general and extensive dispersion ranges. Items for which the means are comparatively large have individual district measures extending at least into the high consensus range. Although the items can be distinguished on the basis of the means of the district standard deviations there are no items about which all districts have a high level of consensus or for which extensive dispersion is common to all districts.

The question underlying this analysis is whether site autonomy is a characteristic about which there is within district consensus. That question cannot be answered either generally or specifically in any satisfactory manner based upon the data presented in Table 4.11. For some districts for some decisions the extent of autonomy would

appear to be structural in that it is a matter of within district consensus. For other districts for the same decisions the extent of autonomy available at school sites would appear to be a matter about which there is dissensus. Given this condition a general statement about the extent of within district consensus would not be justified.

A specific answer to the question concerning within district consensus would identify particular decisions for which the extent of site autonomy was a matter of consensus within all or nearly all the districts. The reason this type of specific answer is unsatisfactory is that the items for which the district standard deviations are most uniformly small are also items for which overall variation of responses was limited. It would be inappropriate to base a conclusion concerning the structural nature of autonomy on the fact that these items have high within district consensus when in fact they are items about which there is consensus generally among all respondents across districts. The level of autonomy reported for these items is not therefore district specific even though it is a matter of within district consensus. This point is illustrated by the information presented in Figures 4.2 and 4.3.

Figure 4.2 presents a scattergram of points representing the 72 items plotted on a vertical axis representing the values of the standard deviations of the responses from the total sample of 545 individual principals listed in Table 4.3. The horizontal axis for Figure 4.2 represents the values of the means of the district standard deviations for each item as presented in Table 4.11. The upper left hand portion of the plot is the area of high variability of overall individual responses and high within district consensus. This area of

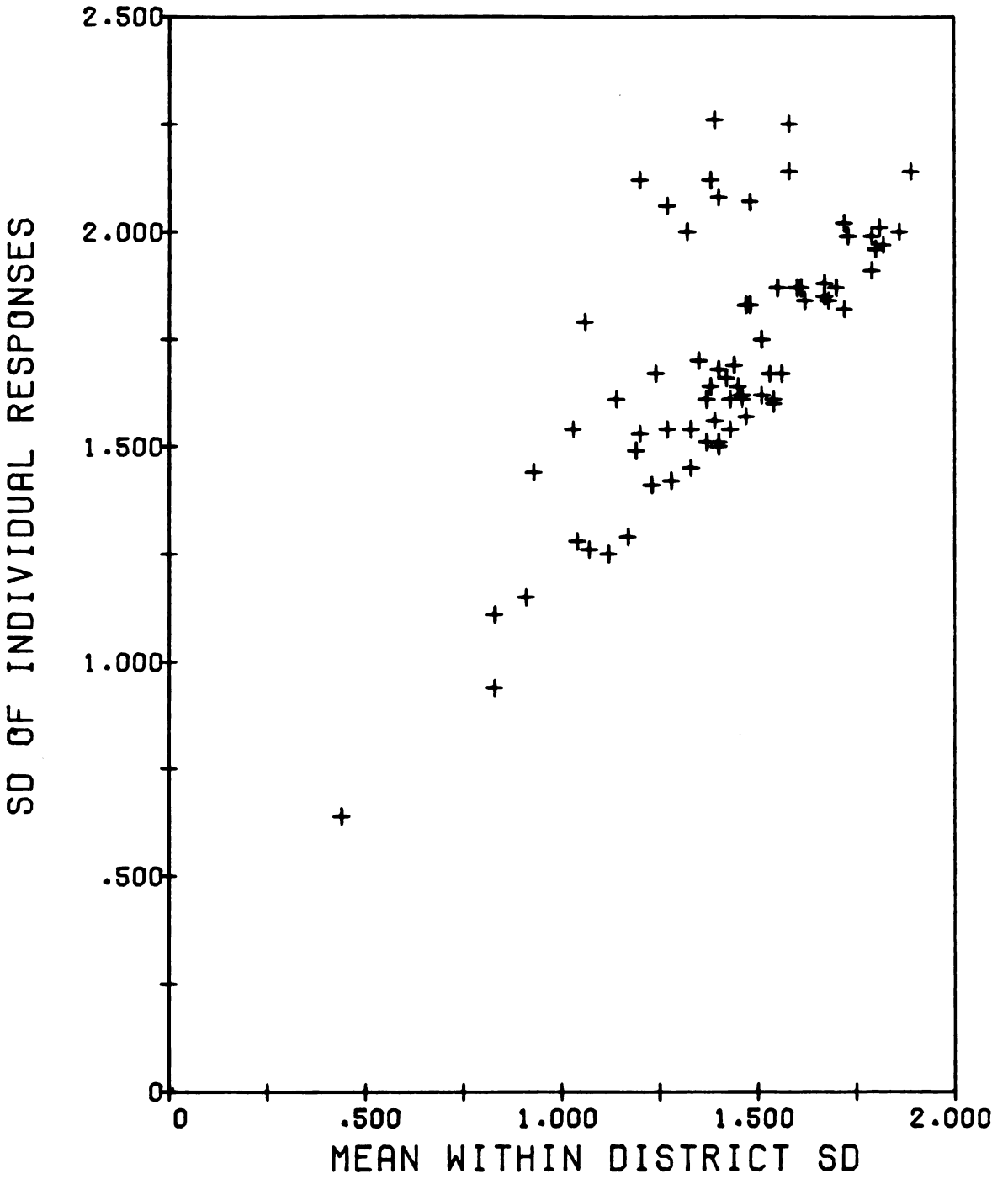

Figure 4.2.--Plot of 72 decision items by means of within district standard deviations and overall standard deviations for individual responses

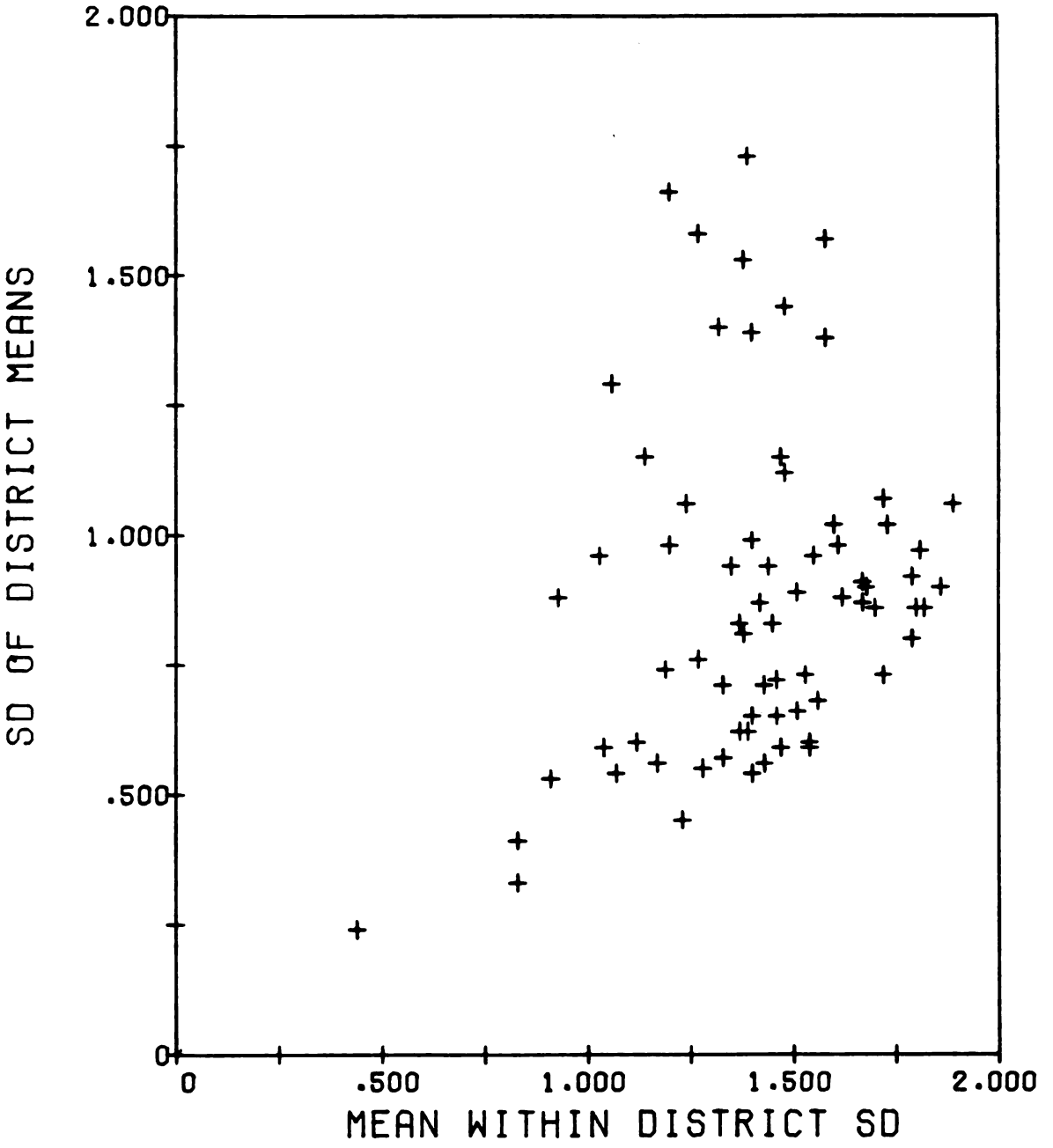

Figure 4.3.--Plot of 72 decision items by means of within district standard deviations and standard deviations of district means

the plot is noticeably vacant. None of the 72 items can be identified as having high overall variability of responses and low within district variability, i.e., high consensus.

Figure 4.3 is similar to Figure 4.2 except that the vertical axis represents values of the standard deviation of district means listed in Table 4.5 as an indication of the overall variation for an item. Once again the upper left hand portion of the plot is the area representing high overall variation and low within district variation. This area is without plotted points. No items can be identified as having high overall variability and also high within district consensus.

In Figure 4.2 and Figure 4.3 items which are distinctly low within district variation, high consensus, are also low overall variation items. The extent of within district consensus that exists for these items cannot be clearly attributed to districts because the consensus about autonomy for the items across districts. The level of site autonomy for these decisions may therefore not fairly be considered a characteristic of the organizational structure of the district.

Standard deviations of responses as a measure of absolute within district consensus have been demonstrated to vary from item to item, but more importantly, from district to district for any given item. The extent of district to district variation in degrees of consensus for most of the items restricts the usefulness of this measure in making any type of general conclusion concerning whether within district consensus justifies the classification of school site autonomy as a characteristic of the organizational structure of school districts. Any decision specific answers to the question are unsatisfactory due to the low overall variability of the items for which within district

variation was uniformly small. Examination of the consistency of the variation in school site autonomy may be summarized as being inconclusive with respect to the overall purposes of this research project.

Relative Consistency

Another persepctive from which to examine the consistency of variation is to determine what portion of the overall variation in the level of site autonomy reported for a decision item may be attributed to or explained by variations between districts. An index of the variation in the dependent variable, y, autonomy, explained by category or group of the independent variable, x, district, as a proportion of total or unexplained variation is provided by the correlation ratio, η^2_{yx}.[1]

$$\eta^2_{yx} = \frac{\text{Explained Variation}}{\text{Total Variation}}$$

The correlation ratio may be computed from the information provided in an analysis of variance table. Specifically, η^2_{yx} is the ratio of the sum of squares between groups, SS_B, to the total sum of squares, SS_T.

$$\eta^2_{yx} = \frac{\text{Sum of Squares Between Groups}}{\text{Sum of Squares Total}} = \frac{SS_B}{SS_T}$$

The value of η^2 may be understood as an index of the extent to which responses for an item within groups are more consistent than the responses for the item over the total sample. In this sense the η^2 statistic is considered as a measure of the relative consistency of variation as compared to standard deviations examined in the preceding

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[1]See William L. Hays, Statistics for the Social Sciences, 2nd ed. (New York: Holt, Rinehart, and Winston, 1973), pp. 683-684; John H. Mueller, Karl F. Schuessler, and Herbert L. Costner, Statistical Reasoning in Sociology, 2nd ed. (Boston: Houghton Mifflin Co., 1970), pp. 325-333.

section as measures of consensus or absolute consistency.

In order to obtain the correlation ratios for each of the 72 items, the one-way analysis of variance, ANOVA, procedures of the subprogram BREAKDOWN of the Statistical Package for the Social Sciences[1] were carried out for the 545 cases of principals grouped by the 48 districts. The F-ratios obtained for the ANOVA procedures provide a test statistic for the null hypothesis that there are no differences among the means of the 48 districts for an item.

$$H_0: u_1 = u_2 = u_3 = u_4 = \ldots = u_{48}$$

The degree of freedom for the F vary from 47 and 473 to 47 and 493 depending on the number of missing responses for a particular item. The values for F and η^2 for each of the 72 items are presented in Table 4.12 in descending order based upon the value of η^2.

For 93% of the items of the Inventory, the first 67 items listed in Table 4.12, F-ratios were sufficiently large, $F > 1.58$ to justify rejection of the null hypothesis of no difference among district means at a significant level of $\alpha = .01$. For only five items were no significant differences found. Of the items for which the null hypothesis could not be rejected, items 58 and 66 may be particularly noted as having F-ratios distinctly smaller than those for the other items.

Information concerning the relative consistency of within district variations in autonomy is provided in Table 4.12 by the η^2 statistics for each item. The first eight items are the items which were grouped as the Budget Dimension as a result of the factor analysis.

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[1]Nie et al., pp. 249-264.

Table 4.12.--Item indicators and a descending array of correlation ratios, η^2, with F-ratios for an analysis of variance of the responses of principals from the 48 districts for 72 items

Item	Item Indicator	F-ratio	η^2
10	textbook funds to supplies	16.96	.621
09	portion of budget for textbooks	16.06	.593
43	science text funds to soc. studies	13.68	.576
63	carryover building budget surplus	12.19	.546
57	equipment funds to library books	11.63	.531
31	portion of budget for equipment	10.03	.494
27	portion of budget for conferences	9.32	.473
48	shift supplies budget to art	8.84	.461
62	minimum typing speed for secretary	8.55	.455
38	select teacher aide from finalists	8.48	.452
13	not replace teacher, hire aides	7.49	.419
36	funds for student field trips	6.90	.401
46	select science textbooks	6.83	.398
67	aide salary funds to staff travel	6.52	.389
01	select teacher from finalists	6.08	.368
55	basic reading books and materials	5.96	.367
03	parents in on asst. prin. selection	5.78	.360
40	community group use of building	5.03	.330
44	custodians cleaning priority	4.48	.302
12	teacher to out-of-state workshop	4.48	.302
68	obtain consultant services	4.25	.293
19	student progress report method	4.20	.286
59	style of replacement furniture	3.99	.281
47	cut aide, add lunch supervisor	3.95	.276
35	time for social studies and math	3.89	.272
71	select brand of lab supplies	3.55	.257
25	not replace teacher, add counselor	3.61	.257
41	reject teacher transfer request	3.48	.254
61	eliminate teacher, hire aides	3.47	.251
54	purchase video tape recorder	3.37	.248
14	penalty for student tardiness	3.40	.246
72	students leave school at lunch	3.20	.238
08	three hour inservice program	3.13	.234
23	not replace teacher, buy equipment	3.16	.233
05	library books to be purchased	3.13	.232
65	buy new set of maps	3.07	.232
64	student appearance standards	3.07	.231
30	citizens on discipline committee	2.98	.225
69	new drug education unit	2.84	.216
02	social studies/science block	2.81	.214
53	shift budget to increase teachers	2.75	.211
56	grade reading achievement goals	2.68	.208

Table 4.12.--Continued

Item	Item Indicator	F-ratio	η^2
06	dismissal of teacher aide	2.71	.207
16	sequence of content for math	2.63	.201
20	length of scheduling periods	2.60	.200
26	secretary's working hours	2.47	.190
18	portion of budget for maintenance	2.43	.189
39	geography learning objectives	2.36	.188
51	focus of social studies instruction	2.34	.186
24	citizens on program planning	2.26	.179
52	food service employee reprimand	2.22	.179
21	first year teacher recommendation	2.18	.174
42	teachers submit lesson plans	2.16	.174
34	hand calculators in math classes	2.12	.169
28	selection of principal	2.08	.167
11	criteria for teacher evaluation	2.07	.165
07	teaching strategy for subject	2.00	.162
70	responsibilities of asst. prin.	1.93	.162
15	modify basic organizational plan	1.93	.157
33	ability grouping for language arts	1.92	.156
17	student club-activity program	1.84	.151
50	maintenance and repair priorities	1.81	.149
22	not accept substitute teacher	1.77	.146
32	team teaching arrangement	1.75	.144
49	admin. salary funds to teachers	1.62	.136
04	file reprimand of teacher	1.60	.135
37	math individualized instruction	1.59	.134
45	schedule class periods and breaks	1.57	.133
60	student removed from class	1.49	.127
29	exchange teaching assignments	1.40	.119
58	circulate monthly newsletter	1.10	.097
66	assign student to teacher or class	0.97	.087

NOTE: If $F > 1.58$, then $p < .01$.

The η^2 statistics for these items range from .461 to .621. The items are each listed among the ten items for which the standard deviations of district means are the largest in Table 4.5. With the exception of item 63, the overall standard deviation for each item is 2.00 or above. In other words the items for which the measures of relative consistency of within district variation, η^2, are the largest, are items for which there is extensive variation of individual responses and extensive dispersion of the means for the district groups. These budget items were not clearly identifiable on the basis of the absolute consensus measures, standard deviations, but are clearly distinguishable using a relative measure of consistency, η^2.

Figures 4.4 and 4.5 illustrate the pattern of relationship between measures of overall variation, items standard deviations and standard deviations of district means, and the η^2 measures of variation explained by districts or relative within district consistency. For each figure the upper right quadrant represents high overall variation in levels of autonomy for an item and large portion of total variation explained by district. The fact that in each figure there are a number of items, the high η^2 budget items, plotted in this area provides a basis for a specific answer to the question of whether variations in site autonomy may be attributed to school districts.

For the items that make up the Budget Dimension, the consistency of the level of autonomy is substantially greater within districts than among the responses generally. The mean of η^2 for the eight items is .537 or, in other words, slightly more than half of the total variation with respect to these items may be explained by variations between districts. The level of autonomy reported by Budget Dimension items

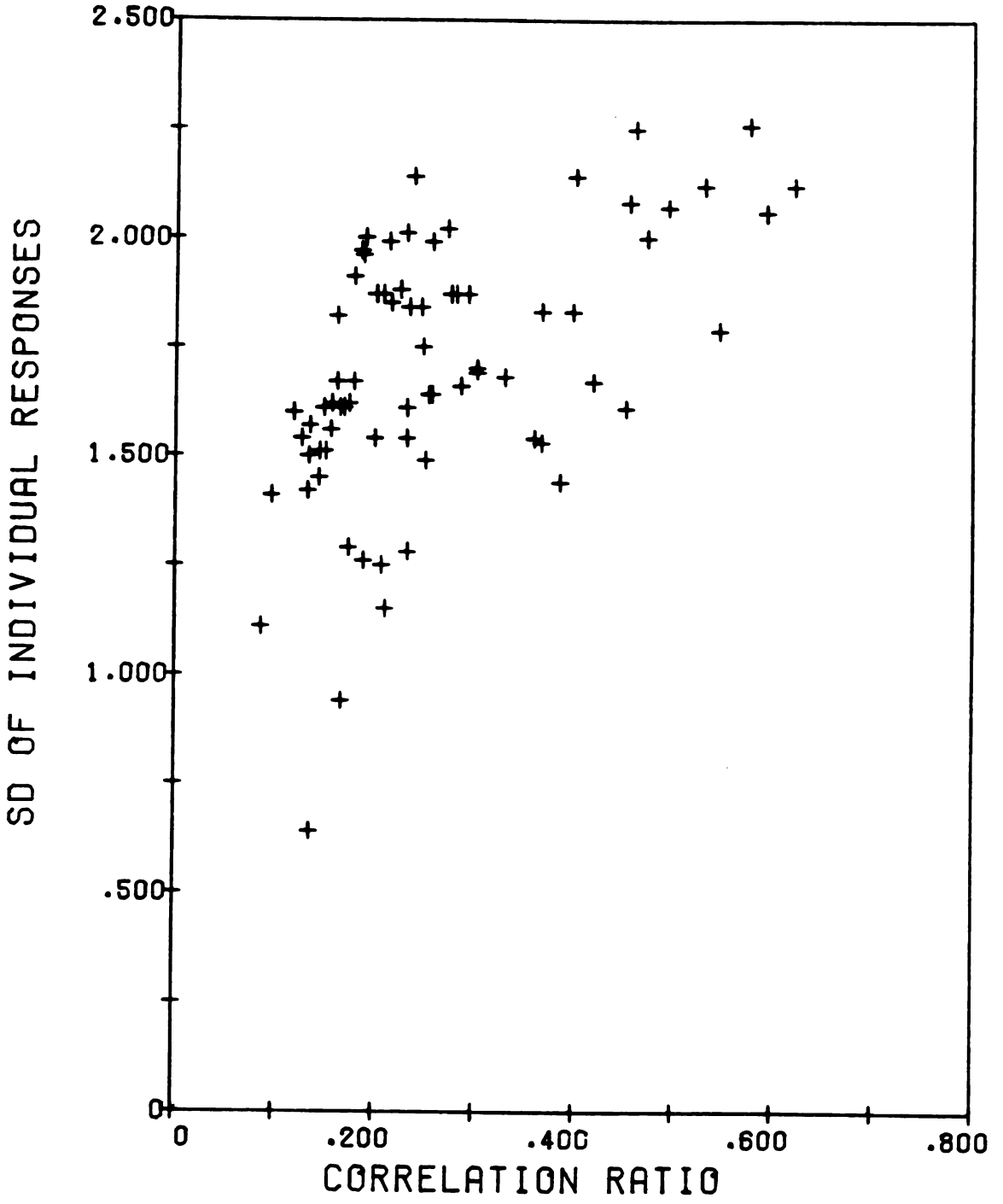

Figure 4.4.--Plot of 72 decision items by correlation ratios, η^2, and standard deviations of individual responses

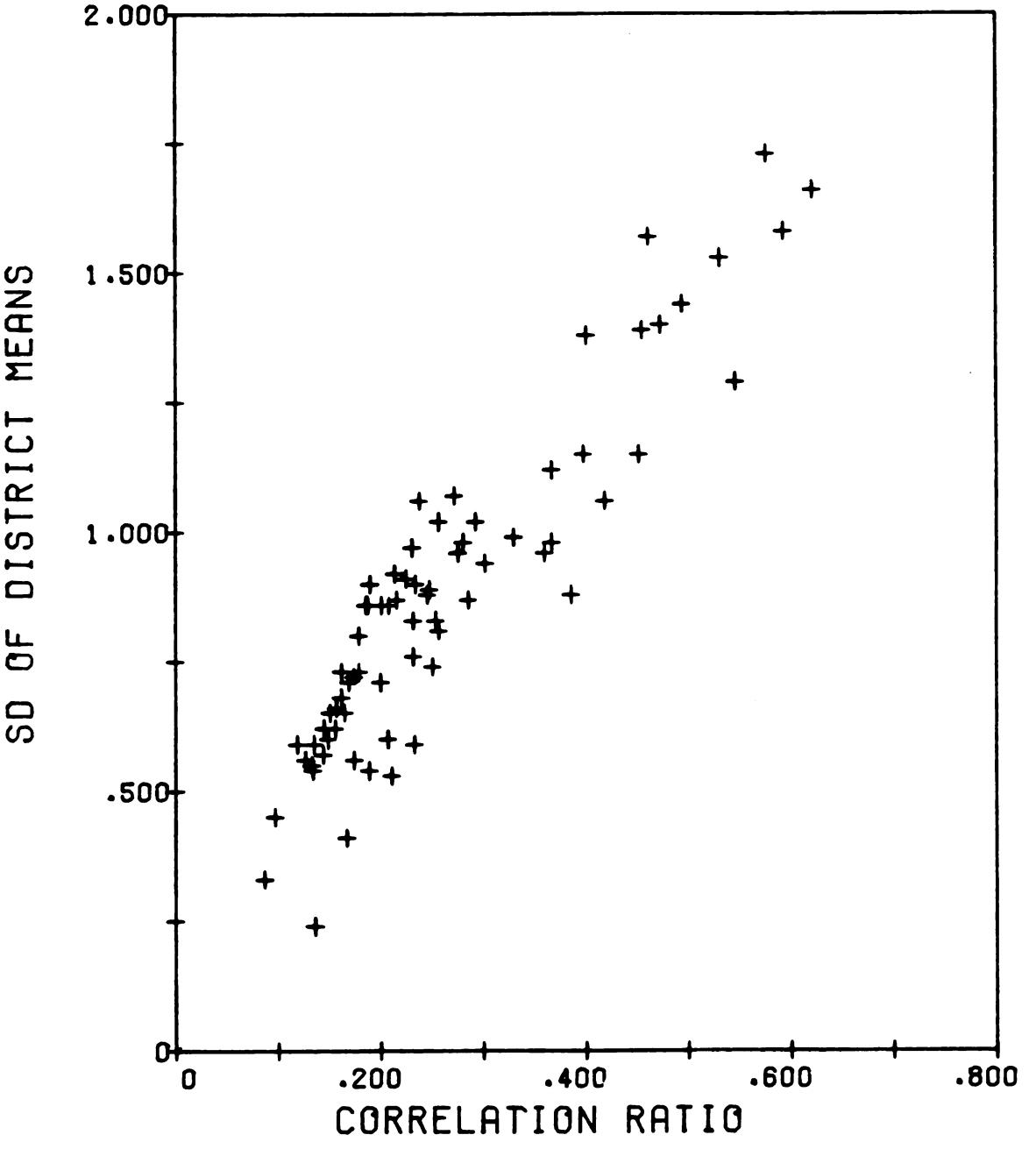

Figure 4.5.--Plot of 72 decision items by correlation ratios. η^2, and standard deviations of district means

varies widely among the individual principals and between districts. The extent of within district consistency or consensus for the items is high relative to the total variation. Therefore one may fairly conclude that the level of site autonomy for Budget Dimension items is to a large degree attributable to differences between school districts, i.e., a characteristic of the organizational structure of school districts.

The means of η^2 for the items grouped in each of the five dimensions of variation identified by factor analysis are listed in Table 4.13. Relative within district consistency in site autonomy is clearly higher for items in the Budget Dimension and lowest for General Dimension items. For four of the five dimensions 35% or less of the total variation is explained by between district differences.

As the information in Table 4.14 indicates, for 50 of the 72 items, η^2 is between .100 and .299. For only 12 items is the value of the statistic .400 or greater. The mean of η^2 for all the items is .264 which would indicate that only slightly more than one quarter of the total variation in levels of autonomy reported by principals is explained by differences between districts. This limited portion of variance explained for the aggregated items and the similarly limited size of the mean η^2 for four of the five dimensions challenges any conclusion that the extent of site autonomy across the items generally should be considered as a structural characteristic of school districts.

The correlation ratio, η^2, as a statistic indicating the relative within group consistency of variation in a sample of districts, has been used to demonstrate that the level of autonomy for a number of specific decisions is to a large extent explained by between district variations.

Table 4.13.--Means of correlation ratios, η^2, for the items identified with the five factors extracted by factor analysis

Dimension of Variation	Mean η^2
Factor 1 - General Dimension	.186
Factor 2 - Budget Dimension	.537
Factor 3 - Staff Resource Flexibility Dimension	.272
Factor 4 - Curriculum Content and Materials Dimension	.272
Factor 5 - Instructional Personnel Selection Dimension	.358

Table 4.14.--Frequencies and cumulative frequencies of correlation ratios, η^2, for 72 items

η^2 Value Range	Frequency	Cumulative Frequency
.700 or more	0	0
.600 to .699	1	1
.500 to .599	4	5
.400 to .499	7	12
.300 to .399	8	20
.200 to .299	25	45
.100 to .199	25	70
.000 to .099	2	72

For these decisions site autonomy is appropriately to be considered as a structural characteristic of the school districts. The highest η^2 statistics were found for items identified with the Budget Dimension. The η^2 statistics for a number of items are very small and for a majority of the items correlation ratios are less than .300. The extent of within district relative consistency of variation for the dimensions other than budget are also quite low. Generally, variations in site autonomy for individual items are not extensively explained by district differences. Variations in autonomy have been shown to be multidimensional. Based upon the data presented and the statistic η^2 as measure of relative consistency within districts the level of school site autonomy for a specific dimension, budget, and a number of individual decisions has been shown to be justifiably considered as characteristics of district organizational structures. Such a conclusion is not supported by the individual item data for school site autonomy generally.

Elementary and Secondary Level Consistency

The aspects of within district consistency to be examined in this section are whether elementary or secondary responses from districts are more or less consistent than responses from the total districts and whether elementary and secondary responses are consistent with each other. The standard deviations and correlation ratios for elementary and secondary data are compared with the values of these statistics for district data in order to determine whether responses from the separate levels are more or less consistent than responses from districts in general. Pearson Correlation Coefficients were computed as measures of the extent to which elementary and secondary district

means were consistent with each other.

A summary of comparative information concerning within district standard deviations for districts and for elementary and secondary levels within districts is presented in Table 4.15.[1] The first feature

Table 4.15.--Means and distributions of average frequencies for within group standard deviations over 72 items for 48 district, elementary, and secondary groups

Groups	Mean Within Group SD Over 72 Items	Average Frequencies				
		Tot. Con.	High Con.	Lmt. Con.	Gen. Dis.	Ext. Dis.
District	1.41	1.9	9.2	24.2	34.6	2.1
Elementary	1.31	7.1	11.7	19.3	28.2	5.7
Secondary	1.23	9.6	14.6	20.1	19.2	8.5

of the information in Table 4.15 to be noted is that the average degree of consensus is greater for elementary groups than for district groups and still greater for secondary groups. The second feature is that the individual district standard deviations are more widely dispersed across the value ranges for elementary and secondary groups than for district groups. The average frequencies in the total consensus and extreme dispersion ranges are distinctly higher for elementary and secondary levels than for total districts. The average of the within district standard deviations is lower for elementary and secondary levels but the range and dispersion of values for the individual district are greater.

[1]The means and frequency distribution for individual items are available in Table F.1 in Appendix A.

Tables 4.16 and 4.17 present comparative information concerning the correlation ratios, η^2, as relative measures of within district consistency for total district groups, elementary groups, and secondary groups.[1] The primary point to be emphasized with respect to the information in Tables 4.16 and 4.17 is that for the items of the Inventory generally, the portion of total variation explained by differences between districts is greater for elementary groups considered separately than for total district groups and still greater for secondary groups.

Table 4.18 presents a descending array of Pearson Correlation Coefficients as measures of the degree of consistency between the 48 elementary group means and 48 secondary group means for each of the 72 items. The statistics range from a small negative correlation of -.08 to a large positive correlation of .87. It is interesting to note that the nine items for which r is the largest are budget items, the same items for which the η^2 measures were the highest.[2] For 50 of the 72 items r is less than .50. Using r^2, the coefficient of determination, as an index of shared variation, one may conclude that for most of the items less than 25% of the variation is shared between elementary and secondary levels. For the 20 items for which r is less than .30, the extent of shared variation indicated by r^2 is less than 10%.

The standard deviations, correlation ratios, and correlation coefficients which have been examined indicate that greater within district group consistency in levels of autonomy is to be found by considering elementary and secondary groups separately. This is understandable given the limited consistency in the levels of autonomy that

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[1]Table F.2, Appendix F presents the statistics for each item.

[2]The correlation between η^2 and r for the 72 items is .892.

Table 4.16.--Means of correlation ratios, η^2, over 72 items for 48 district, elementary, and secondary groups

Groups	Mean Correlation Ratio for 72 Items
District	.264
Elementary	.334
Secondary	.386

Table 4.17.--Frequency distributions of district, elementary, and secondary correlation ratios, η^2, for 72 items

η^2 Value Range	District Frequency	Elementary Frequency	Secondary Frequency
.700 or more	0	0	1
.600 to .699	1	3	4
.500 to .599	4	9	9
.400 to .499	7	5	11
.300 to .399	8	19	30
.200 to .299	25	28	15
.100 to .199	25	8	2
.000 to .099	2	0	0

Table 4.18.--Item indicators and a descending array of Pearson Correlation Coefficients, r, as measures of the association between district elementary and secondary means for 72 items

Item	Item Indicator	r	Item	Item Indicator	r
09	portion of budget for textbooks	.87	61	eliminate teacher, hire aides	.40
43	science text funds to soc. studies	.83	72	students leave school at lunch	.38
10	textbook funds to supplies	.81	25	not replace teacher, add counselor	.37
63	carryover building budget surplus	.80	23	not replace teacher, buy equipment	.36
57	equipment funds to library books	.80	35	time for social studies and math	.36
38	select teacher aide from finalists	.76	47	cut aide, add lunch supervisor	.36
31	portion of budget for equipment	.75	39	geography learning objectives	.34
27	portion of budget for conferences	.74	08	three hour inservice program	.34
48	shift supplies budget to art	.73	26	secretary's working hours	.34
62	minimum typing speed for secretary	.72	21	first year teacher recommendation	.33
03	parents in on asst. prin. selection	.71	52	food service employee reprimand	.33
01	select teacher from finalists	.67	11	criteria for teacher evaluation	.33
44	custodians cleaning priority	.63	02	social studies/science block	.33
40	community group use of building	.62	14	penalty for student tardiness	.33
13	not replace teacher, hire aides	.62	69	new drug education unit	.32
36	funds for student field trips	.62	22	not accept substitute teacher	.31
12	teacher to out-of-state workshop	.60	49	admin. salary funds to teachers	.28
30	citizens on discipline committee	.54	18	portion of budget for maintenance	.27
55	basic reading books and materials	.53	65	buy new set of maps	.27
46	select science textbooks	.51	28	selection of principal	.26
59	style of replacement furniture	.51	04	file reprimand of teacher	.24
06	dismissal of teacher aide	.50	05	library books to be purchased	.24
53	shift budget to increase teachers	.49	17	student club-activity program	.23
42	teachers submit lesson plans	.49	37	math individualized instruction	.21
54	purchase video tape recorder	.48	60	student removed from class	.21
67	aide salary funds to staff travel	.48	07	teaching strategy for subject	.18
68	obtain consultant services	.47	50	maintenance and repair priorities	.17
19	student progress report method	.44	29	exchange teaching assignments	.15
56	grade reading achievement goals	.44	45	schedule class periods and breaks	.13
71	select brand of lab supplies	.44	32	team teaching arrangement	.12
20	length of scheduling periods	.42	70	responsibilities of asst. prin.	.12
16	sequence of content for math	.42	15	modify basic organizational plan	.10
41	reject teacher transfer request	.41	58	circulate monthly newsletter	.10
51	focus of social studies instruction	.41	24	citizens in program planning	.07
64	student appearance standards	.41	66	assign student to teacher or class	-.01
34	hand calculators in math classes	.40	33	ability grouping for language arts	-.08

exists between groups at the two levels for most decision items. The specific decision items or areas of decision making concerning which there is noticeable consistency are the same decisions or areas for which high relative consistency was found using η^2 measures for total district groups. In each case greatest consistency was found with respect to budget items.

Multiple Item Measures

In order to examine within district consistency in levels of site autonomy using multiple item measures rather than single item values, unweighted scales were constructed based upon the five groups of items identified by factor analysis. The portion of total variation in scale values explained by differences between districts, η^2, was computed for district, elementary, and secondary groups. These measures of within district relative consistency for the scale values are presented in Table 4.19. Also listed are the individual and mean η^2 statistics for the items in each of the five groups and η^2 for the values of a scale which is the combination of the five scales.

For four of the five dimensions the value of η^2 for the multiple item scales are larger than the mean of the η^2 statistics for the individual items that make up the scale. For district, elementary, and secondary groups on the Budget Dimension and the Instructional Personnel Selection Dimension and for elementary and secondary groups on the Staff Resources Flexibility Dimension, the η^2 for scale values is also greater than the largest η^2 for any individual item of the scale. These facts indicate that there is greater within district consistency for multiple item measures of site autonomy than for single item measures.

Table 4.19.--District, elementary, and secondary correlation ratios, η^2, for multiple item scales with individual and mean η^2 values for the items of each dimension

	Correlation Ratio		
	Dist.	Elem.	Sec.
Factor 1 - General Dimension			
Item 04	.135	.170	.295
Item 05	.232	.396	.308
Item 14	.246	.320	.388
Item 17	.151	.252	.244
Item 22	.146	.237	.247
Item 26	.190	.306	.287
Item 29	.119	.137	.316
Item 30	.225	.297	.269
Item 32	.144	.229	.281
Item 33	.156	.272	.367
Item 34	.169	.204	.323
Item 37	.134	.167	.263
Item 42	.174	.197	.287
Item 44	.302	.376	.343
Item 45	.133	.240	.250
Item 58	.097	.164	.178
Item 60	.127	.222	.219
Item 65	.232	.399	.275
Item 66	.087	.154	.190
Item 70	.162	.286	.274
Mean	.168	.251	.280
Scale 1	.148	.252	.318
Factor 2 - Budget Dimension			
Item 09	.593	.610	.654
Item 10	.621	.662	.713
Item 27	.473	.577	.503
Item 31	.494	.563	.530
Item 43	.576	.626	.664
Item 48	.461	.524	.563
Item 57	.531	.546	.629
Item 63	.546	.564	.666
Mean	.537	.584	.615
Scale 2	.720	.751	.777

	Correlation Ratio		
	Dist.	Elem.	Sec.
Factor 3 - Staff Resources Flexibility Dimension			
Item 13	.419	.458	.552
Item 23	.233	.246	.426
Item 25	.257	.314	.453
Item 47	.276	.373	.464
Item 49	.136	.224	.210
Item 53	.211	.270	.312
Item 61	.251	.246	.471
Item 67	.389	.466	.569
Mean	.272	.325	.432
Scale 3	.406	.494	.589
Factor 4 - Curriculum Content and Material Dimension			
Item 16	.201	.226	.384
Item 39	.188	.241	.335
Item 46	.398	.538	.485
Item 55	.367	.544	.371
Item 56	.208	.274	.297
Mean	.272	.365	.374
Scale 4	.347	.433	.468
Factor 5 - Instruction Personnel Selection Dimension			
Item 01	.368	.409	.506
Item 38	.452	.545	.504
Item 41	.254	.331	.364
Mean	.358	.428	.458
Scale 5	.463	.676	.686
Combination of the Five Scales	.542	.620	.660

Further investigation of the utility of using multiple item or combined measures of site autonomy was carried out by the construction of a scale which was a combination of Scales 1, 2, 3, 4, and 5. The new combined scale may be considered as a general measure of autonomy in that it is an additive indices of variations in the dimensions of autonomy measured by the five primary scales. The portion of total variations in the values for the combined scale explained by between district differences is presented by the η^2 statistics in Table 4.19 for district, elementary, and secondary groups. These values indicate that more than half of the total variation may be attributed to between district differences. In other words, when the general level of site autonomy is measured by a combination of the scales for the five dimensions, substantial portions of the variations are explained by district differences. This finding differs distinctly from the conclusion reached based upon the mean of η^2 for the 72 items as the measure of general or overall autonomy.

The data continues to show that there is greater within group consistency in elementary and secondary groups considered separately than in overall district groups. Also to be observed is that resource allocation decisions such as those included in Scale 2, Budget Dimension, and to a lesser degree, Scale 3, Staff Resources Flexibility Dimension, are the decisions for which reported levels of site autonomy are most consistent within districts.

Differentiation of Districts

The questions addressed in this section of the analysis are whether there are differences among school districts in the overall levels of site autonomy or the average degrees of consensus about

autonomy and whether principals from districts which claim to be decentralized report higher levels of site autonomy than principals from districts generally. The 48 districts are compared on the basis of means and distributions of item means as measures of autonomy and of standard deviations as measures of consensus about autonomy. The strength and direction of the relationship between level of autonomy and degree of consensus is also examined. The results of factor analysis using Q-type factoring are examined to determine whether there are identifiable groups or types of districts based upon the variations in autonomy reported for the 72 decision items. Finally districts which are reported to be decentralized are compared with districts generally to determine whether the findings of this research project are consistent with the claims made by and for reputedly decentralized districts.

Site Autonomy

Table 4.20 presents a comparative listing of the overall means and frequency distributions of item means for the 48 school districts. Clearly demonstrated by this data is the extensive differences that exist in the overall or average levels of site autonomy reported for the districts. The mean of item means of 3.83 for District 01 is more than twice the overall mean of 1.69 for District 29. Given the fact that these measures of overall autonomy are the result of aggregation across sites within districts and aggregation across items, the range of the measures must be considered extremely wide. With the exception of District 01 and 37, overall autonomy values are distributed quite evenly between 1.69 and 3.35.

Table 4.20.--Means and frequency distributions of item means for the 48 districts (N = 72)

Dist.	Mean of Item Means	Freq. of Item Means[a]						Dist.	Mean of Item Means	Freq. of Item Means[a]					
		0	1	2	3	4	5			0	1	2	3	4	5
01	3.83	0	5	7	6	25	29	10	2.38	9	12	15	23	11	2
37	3.53	1	4	12	9	31	15	45	2.34	12	12	13	16	17	2
15	3.35	1	10	5	14	31	11	25	2.33	7	16	15	19	15	0
17	3.30	5	5	9	14	25	14	35	2.32	21	6	7	18	13	7
34	3.29	1	8	7	19	27	10	39	2.31	8	19	10	20	12	3
36	3.28	5	5	8	14	25	15	04	2.31	19	8	11	9	23	2
42	3.18	1	8	10	18	31	4	40	2.25	15	16	9	12	14	6
13	3.13	3	6	11	20	23	9	24	2.25	14	8	17	18	15	0
23	3.07	6	7	12	14	21	12	28	2.17	11	13	18	20	10	0
44	3.05	2	11	8	16	30	5	05	2.17	10	10	16	29	7	0
21	3.02	0	7	8	26	31	0	22	2.15	16	15	9	17	13	2
38	3.00	2	13	7	18	30	2	41	2.14	9	17	17	14	11	4
43	2.89	1	11	13	22	25	0	18	2.14	10	23	8	13	14	4
12	2.84	11	5	13	10	20	13	32	2.12	5	21	16	21	9	0
11	2.76	9	16	6	7	23	11	06	2.08	16	12	13	15	16	0
14	2.67	9	13	9	15	16	10	03	2.05	14	14	13	20	11	0
27	2.62	12	9	8	14	26	3	33	2.05	12	16	15	18	9	0
31	2.58	4	13	14	22	19	0	02	2.01	11	18	17	16	16	0
26	2.52	9	9	14	19	19	2	07	1.96	14	16	18	14	8	2
47	2.50	5	11	20	16	19	1	16	1.88	16	16	17	10	12	1
19	2.48	4	11	23	15	19	0	48	1.81	17	17	16	13	9	0
09	2.47	11	13	11	11	21	5	30	1.80	16	16	18	13	9	1
46	2.45	6	17	14	16	12	7	08	1.73	19	17	14	13	9	0
20	2.42	7	10	17	26	12	0	29	1.69	25	8	19	12	5	3

[a]District item means rounded to nearest integer.

Consensus

Preceeding portions of this analysis have demonstrated that the degree of consistency or consensus within districts about the level of school site autonomy varies from item to item and among districts with respect to individual items. The information presented in Table 4.21 demonstrates that there are also varying levels in overall or average consensus among the districts. The means of the item standard deviations for the districts extend from a low of 1.05 to a high of 1.92 or a range of .87. The district standard deviations for individual items range from a minimum 0.00 to a maximum of 2.64. The district mean standard deviations spread over approximately one-third of the range of the district standard deviations for individual items, which may be considered quite extensive for a measure which is aggregated across 72 items. The extent to which the district mean standard deviations are dispersed over a relatively wide range of values indicates that school districts should be understood as demonstrating definite differences in the degree of consensus about autonomy generally as well as differences in the degree of consensus about specific decision items and differences in levels of site autonomy.

Relationship Between Degree of Consensus and Level of Site Autonomy

The data presented in Tables 4.20 and 4.21 have demonstrated that the averaging of district means and standard deviations across the 72 items provides a basis for identifying high consensus districts and low consensus districts as well as high autonomy districts and low autonomy districts. In order to examine the extent and direction of relationship between site autonomy and consensus about autonomy, the

Table 4.21.--Means and frequency distribution of within district item standard deviations for 48 districts (N = 72)

Dist.	Mean SD	Freq. of Item SD					Dist.	Mean SD	Freq. of Item SD				
		Tot. Con.	High Con.	Lmt. Con.	Gen. Dis.	Ext. Dis.			Tot. Con.	High Con.	Lmt. Con.	Gen. Dis.	Ext. Dis.
01	1.05	3	30	21	19	0	42	1.43	1	8	23	39	1
35	1.12	10	13	25	20	4	06	1.43	1	9	23	35	4
40	1.14	4	15	30	23	0	10	1.45	1	4	33	33	1
11	1.16	3	22	24	21	2	05	1.45	1	8	28	34	1
34	1.21	3	9	39	21	0	39	1.45	1	8	21	38	4
13	1.22	1	15	33	23	0	45	1.46	7	2	20	43	0
23	1.22	3	17	23	28	1	15	1.46	0	3	36	33	0
04	1.24	3	13	29	23	4	08	1.47	1	13	14	41	3
30	1.27	1	17	23	29	2	38	1.49	0	10	25	35	2
36	1.27	3	15	27	25	2	03	1.50	1	10	17	44	0
12	1.29	4	14	23	29	2	20	1.50	0	5	27	38	2
14	1.30	4	17	13	36	2	28	1.50	4	2	20	44	2
48	1.30	1	13	24	34	0	41	1.50	0	3	35	30	4
29	1.31	6	11	24	25	6	02	1.52	1	5	27	34	5
17	1.33	0	6	37	26	3	19	1.53	0	6	22	43	1
16	1.33	6	10	19	36	1	31	1.55	0	2	30	38	2
46	1.34	1	11	26	33	1	07	1.55	6	2	13	44	7
26	1.35	3	11	25	32	1	32	1.56	1	4	24	40	3
33	1.38	0	9	32	31	0	37	1.58	0	4	34	29	5
25	1.38	0	8	30	33	1	24	1.58	0	14	6	46	6
09	1.39	3	11	21	35	2	47	1.60	0	5	23	41	3
22	1.40	0	11	29	32	0	44	1.71	0	3	18	50	1
27	1.42	0	8	28	36	0	43	1.75	0	1	11	55	5
18	1.43	3	6	20	42	1	21	1.92	0	0	9	60	3

Pearson Correlation Coefficient was computed for the district mean of item means from Table 4.20 and district mean of item standard deviations from Table 4.21. The value of the coefficient for relationship is $r = -.071$. The extent of shared variation is nearly zero as indicated by a coefficient of determination value, $r^2 = .005$. Figure 4.6 presents a plot of the relationship with each point representing the values for one of the 48 districts. The obvious conclusion is that there is no meaningful relationship between overall levels of site autonomy reported for districts and average degrees of consensus about autonomy within districts.

Q-Factor Analysis of Districts

In order to further examine differences between districts in the extent of site autonomy, factor analysis was conducted using Q-type factoring.[1] According to Cattell, "Q-technique is most useful if one wishes immediately to see how many types there are in a population and to divide it up into types."[2] The Q-factoring was employed in order to examine the intercorrelation of district variations over the 72 items considered as cases in order to determine what underlying groupings or types may be present among the districts. The identification of groups using these techniques would evidence an empirical differentiation between districts on the basis of site autonomy.

In order to carryout the Q-type factor analysis the matrix of district means for the 72 items for the 48 districts was transposed.

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[1]See William Stephenson, A Study of Behavior (Chicago: University of Chicago Press, 1953); Nie et al., p. 470.

[2]R. B. Cattell, Factor Analysis (New York: Harper, 1952), p. 101.

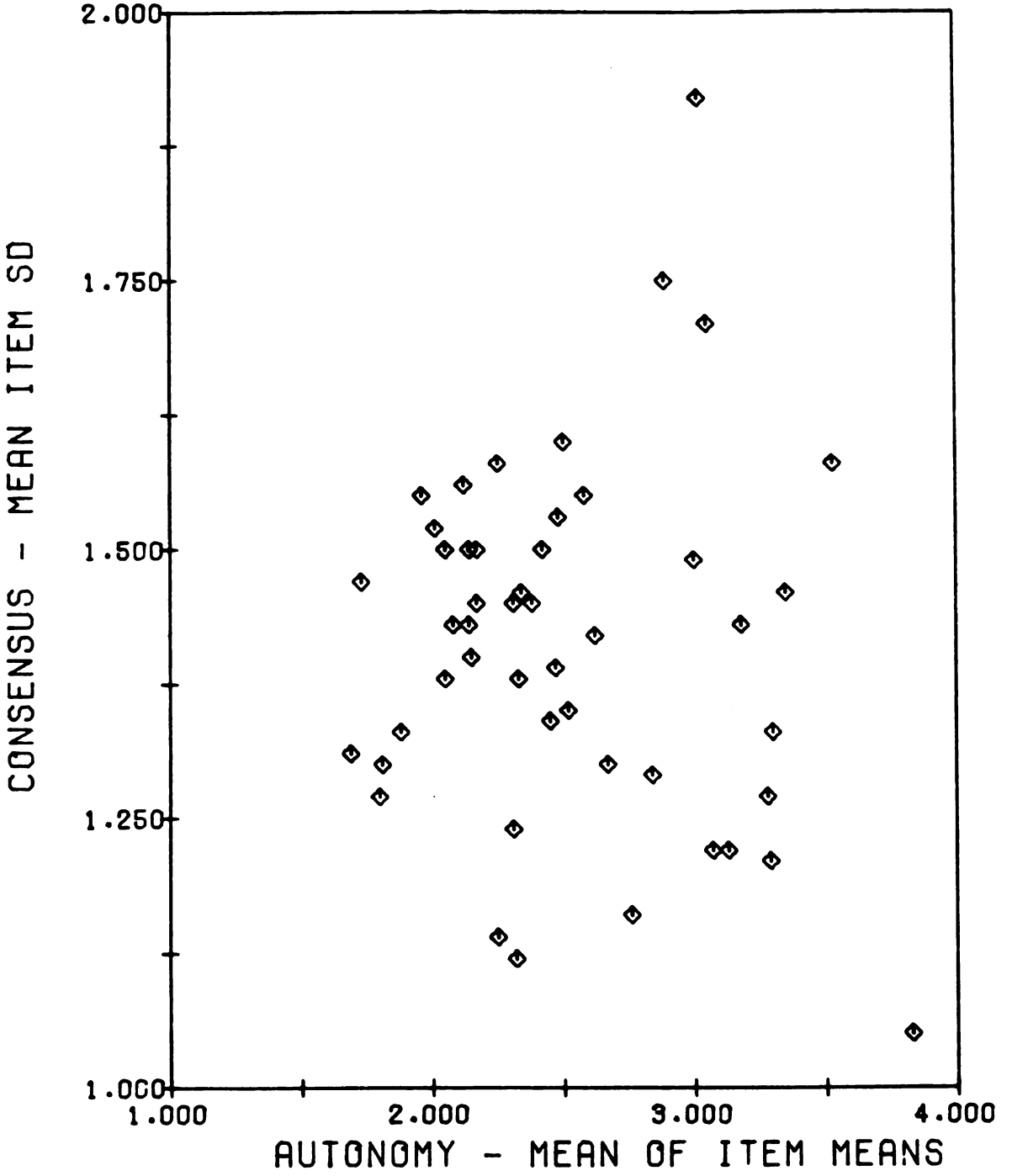

Figure 4.6.--Plot of 48 districts by autonomy (mean of 72 item means) and consensus (mean of 72 item standard deviations)

Principal factoring with varimax orthogonal rotation was conducted with the 48 districts as variables and the 72 items as cases. Three orthogonal factors having eigenvalues greater than 1.00 were extracted. The factor matrix obtained was examined in terms of the loading of districts on the three factors. None of the 48 districts were found to load primarily on the third factor. The third factor was therefore dropped and a second factor analysis conducted with the number of factors to be extracted controlled at two. The factor matrix obtained from these procedures is presented in Table 4.22 with the districts listed in order of the overall means from Table 4.20. The primary loading of districts are also indicated.

An extensive degree of consistency between the ordering of districts based upon mean autonomy scores and the groupings of districts based upon the factors is the primary point to be observed from Table 4.22. Of the 19 districts which load primarily on Factor 2, 17 have all item means of 2.48 or more. Of the 29 items which load primarily on Factor 1, 25 have all item means of less than 2.48. The clusters of districts identified by the factor analysis were based upon the intercorrelations among the districts in variations in autonomy for the individual decision items, rather than in terms of mean or overall district autonomy scores. The clusters of districts are therefore not totally consistent with ordering of districts by their all item means. The extent of consistency is sufficient, however, to support the designation of Factor 1 as the Low Autonomy Type and Factor 2 as the High Autonomy Type.

As the plot presented in Figure 4.7 indicates the relationship between Factor 1 loadings and Factor 2 loadings is predominantly

Table 4.22.--Factor matrix, principal factoring with varimax rotation, for 48 districts with 72 items as cases (districts listed in descending order of means for all items)

District	Mean	Factor 1	Factor 2	District	Mean	Factor 1	Factor 2
01[a]	3.83	.196	.639*	10	2.38	.757*	.494
37[a]	3.53	.233	.830*	45	2.34	.794*	.374
15	3.35	.193	.862*	25	2.33	.653*	.502
17	3.30	.473	.598*	35	2.32	.829*	.345
34	3.29	.524	.682*	39	2.31	.741*	.387
36	3.28	.500	.671*	04	2.31	.597*	.518
42	3.18	.193	.808*	40	2.25	.849*	.302
13	3.13	.326	.803*	24	2.25	.683*	.557
23	3.07	.426	.807*	28	2.17	.555*	.466
44[b]	3.05	.451	.624*	05	2.17	.508	.645*
21[b]	3.02	.511	.634*	22	2.15	.860*	.321
38[b]	3.00	.722*	.466	41	2.14	.741*	.429
43	2.89	.368	.778*	18	2.14	.785*	.389
12[b]	2.84	.408	.803*	32	2.12	.745*	.533
11	2.76	.451	.700*	06	2.08	.833*	.354
14	2.67	.348	.678*	03	2.05	.868*	.276
27	2.62	.877*	.288	33	2.05	.849*	.349
31	2.58	.438	.747*	02	2.01	.848*	.341
26	2.52	.730*	.404	07	1.96	.587	.662*
47[b]	2.50	.659*	.565	16	1.88	.824*	.375
19	2.48	.515	.673*	48	1.81	.846*	.273
09	2.47	.725*	.486	30	1.80	.709*	.464
46	2.45	.694*	.551	08	1.73	.814*	.370
20	2.42	.683*	.557	29	1.69	.835*	.300

NOTE: Factor 1 accounted for 68.0% of the variance and Factor 2 accounted for 7.1%. Cumulative variance accounted for was 75.1%.

*Primary loading.

[a]District noted for extensive autonomy of school sites.

[b]District cited as being administratively decentralized.

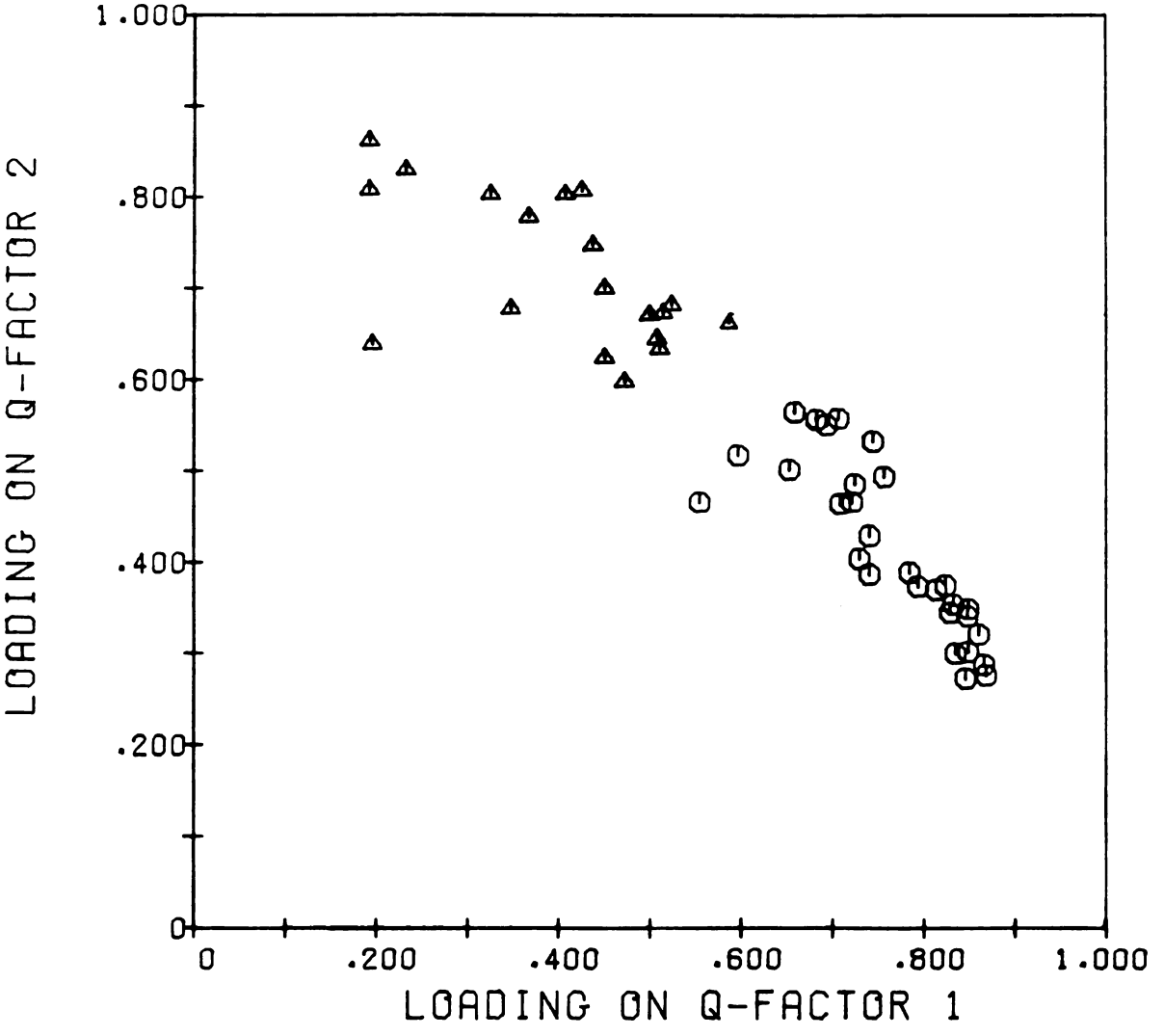

Figure 4.7.--Plot of rotated factor loadings for 48 districts

inverse. Also to be noted is the separation of cluster of districts which load primarily on Factor 1 from the districts which load primarily on Factor 2. The distinction between these clusters provides evidence of differentiation between school districts on the basis of levels of site autonomy reported for the items of the School Site Autonomy Inventory. Differences between districts in terms of the two factors are also demonstrated in Table 4.23 which presents overall mean and multiple item scale values for the six districts most clearly identifiable with each of the factors. Table 4.24 presents scale reliability coefficients.

Reputedly Decentralized Districts

A number of districts were included in the sample which have been identified in the literature as allowing a high degree of school site autonomy or having established some type of administratively decentralized organizational structure. These districts are identified in Table 4.22. The data gathered from principals from two districts, 01 and 37, which have national reputations for the autonomy of their school sites was clearly consistent with their reputations. The other districts noted for some form or degree of administrative decentralization are each among the upper half of the sample districts in terms of mean autonomy scores. These districts are not as strongly identified with the High Autonomy Factor as are districts 01 and 37. In fact, district 38, which is reputed to be decentralized has its primary factor loading on Factor 1, the Low Autonomy Factor. School site autonomy has been presented as a specific form of decentralization. Those districts noted for this specific type of administrative organization are those for which the data of this study is most consistent with their reputations.

Table 4.23.--Overall means and scale values for six High Autonomy and six Low Autonomy districts

District	Primary Factor Loading	Difference Between Loadings	Mean of Item Means	Scale 1 General	Scale 2 Budget	Scale 3 Staff Res. Flex.	Scale 4 Curr. Cont. and Mat.	Scale 5 Inst. Pers. Select.	Combined Scales
				Factor 2 - High Autonomy					
15	.862	.669	3.35	4.10	4.53	1.60	2.92	3.71	3.38
42	.808	.615	3.18	4.01	4.14	1.74	2.60	3.70	3.24
37	.830	.597	3.53	4.32	4.33	2.12	3.63	3.62	3.58
13	.803	.477	3.13	4.16	4.03	1.13	2.55	3.31	2.92
01	.639	.443	3.83	4.53	4.15	3.25	4.68	3.06	3.94
43	.778	.410	2.89	3.89	3.64	1.16	2.20	3.79	2.93
		Mean	3.32	4.17	4.14	1.83	2.76	3.53	3.33
				Factor 1 - Low Autonomy					
03	.868	.592	2.05	3.70	0.53	0.97	1.47	1.82	1.78
27	.866	.578	2.62	3.91	0.58	0.39	2.38	3.72	2.17
48	.846	.573	1.81	3.32	0.43	0.26	1.70	0.93	1.36
40	.849	.547	2.25	3.75	0.25	0.54	1.53	2.87	1.61
22	.860	.539	2.15	3.66	0.51	0.44	1.42	2.52	1.75
29	.835	.535	1.69	3.24	0.24	0.28	1.22	2.17	1.52
		Mean	2.06	3.60	0.42	0.48	1.62	2.34	1.70

Table 4.24.--Cronbach's alpha coefficients of reliability for individual responses and for district means for scales of the five dimensions, a combination of the five dimensional scales, and for all the 72 items of the Inventory

Scale	Cronbach's Alpha	
	Individual Data	District Means
Scale 1: General Dimension	.904	.869
Scale 2: Budget Dimension	.890	.946
Scale 3: Staff Resources Flexibility Dimension	.838	.916
Scale 4: Curriculum Content and Materials Dimension	.705	.819
Scale 5: Instructional Personnel Selection Dimension	.718	.892
Combination of Five Scales	.745	.806
All 72 Items of the Inventory	.947	.968

Summary of the Analysis

This chapter has presented an analysis of the data concerning differences in the autonomy of individual school buildings or sites within school districts. The data was analyzed in an effort to answer the exploratory questions which have guided this study. Included in the analysis were examinations of the extent, dimensions and consistency of variations in site autonomy, and the extent of differentiation among school districts based upon such variation. This final portion of the chapter summarizes the findings of the analysis.

Extent of Variation

Examination of the standard deviations of the responses from the 545 individual principals and of the means of the responses for the 48 district groups indicated that the degree of autonomy for most of the 72 items varied extensively among individual principals and among aggregated district groups. Variation in individual responses was described as limited consensus or general dispersion for 70 of the 72 items. The mean standard deviation for individual data across all items was 1.70. For 55 of the 72 items the range of group means was 3.00 or greater. The extent of variations in the data was quite extensive even when aggregated by district.

The particular decisions concerning which the differences in autonomy were the greatest were predominantly budget decisions. Budget decisions evidenced the greatest variation at both levels of analysis. A number of personnel related decisions were included among those concerning which variation in autonomy were the least.

Dimensions of Variation

That variations in site autonomy are multidimensional was demonstrated by factor analyzing the data. Specific dimensions were defined as being related to budget, staff resources flexibility, curriculum content and matters, and instructional personnel selection. A general factor or dimension was also extracted. The defined dimensions were demonstrated to be quite consistent with a priori categories of decisions which were based on areas of administrative responsibility.

Consistency of Variation

The issue of consistency of variations in site autonomy was first examined in terms of the extent to which there was within district consensus or absolute consistency in the level of autonomy reported by principals within districts. The mean value of district item standard deviations for nearly all the items fell in the limited consensus or general dispersion ranges. For only five items was the mean of district standard deviations less than 1.00. A second point was that even though the means of the district item standard deviations varied for the items generally there are wide differences in the degree of consensus indicated by the standard deviation values for the individual districts. For 70 of the 72 items district standard deviations extend at least into the high consensus and general dispersion ranges. Items for which the mean of district standard deviations was large had individual district values in the high consensus range. Similarly, items for which the mean of district standard deviations was small had individual district values in the general dispersion and extensive dispersion ranges. For the individual items there were extensive differences in the extent of within district consensus.

A third aspect of the findings was that, using the means of district standard deviations as measures of within district consensus, it was not possible to identify any decisions for which consensus was generally high for which extensive variation had been found among either individual responses or aggregated district group means. Items having the lowest mean district standard deviations were items for which the standard deviation of individual responses and district means were also low.

The extent of relative consistency, portion of total variation in autonomy explained by differences between districts, was examined based upon the correlation ratio, η^2. For most of the individual items less than 30% of the total variation in autonomy was explained by district differences. For 12 items more than 40% and up to a maximum of 62% of variation was explained by differences between districts. The items for which η^2 was the highest were the items included in the Budget Dimension. For all items the mean value of η^2 was .264 which indicates that an average of slightly more than one-fourth of the total variation in autonomy was explained by between district differences.

When principals from elementary sites and secondary sites in their districts were considered separately the mean district standard deviations were found to be smaller and the η^2 statistics larger. In other words, within district consensus or consistency was greater when elementary or secondary groups were considered separately than when groupings were composed of all principals from each district. Extensive variation was found in the extent to which elementary and secondary item means for the 48 districts were correlated. The items for which elementary and secondary means were highly correlated were predominantly

those items for which the η^2 values were high. Within district variation for many of the items is partially accounted for by differences between elementary and secondary levels.

Using multiple item scales composed of the items in each of the five dimensions it was demonstrated that portion of total variation explained by differences between district, η^2, was greater for the scales values than for the average of the individual items in the scales. In several instances η^2 was higher for scale values than for any of the individual items. By using a combination of scales as a measure of general or overall autonomy, the portion of total variation explained by differences between districts was in excess of 50%, substantially higher than the average of the η^2 values for individual items.

Differences Between Districts

District means and standard deviations for individual items indicated that there were wide differences between districts in the levels of autonomy in the degrees of consensus about autonomy within districts for individual decisions. Based upon the means of item means and item standard deviations for all 72 items, there were also extensive differences between districts in overall levels of site autonomy and average degrees of consensus about autonomy. High overall autonomy districts were easily distinguishable from low autonomy districts and high consensus districts were distinguishable from low consensus districts. The overall levels of autonomy and the average degrees of consensus about autonomy were shown to be not significantly related.

Examination of the differences between districts also involved a Q-type factor analysis in which the districts were treated as

variables and the patterns of intercorrelation among the variables were examined using the 72 items as cases. Two factors were extracted which were defined as the High Autonomy Type and Low Autonomy Type based upon the overall autonomy scores of the districts identifiable with each of the factors. The districts were clearly differentiated into two clusters based upon these factors.

Two districts which have national reputations for the extent of autonomy of their school sites were found to have the highest mean autonomy values and to be among those districts most clearly identifiable with the High Autonomy Factor. Several other districts cited in the literature as being administratively decentralized in some form and to some degree were found to have relatively high mean autonomy scores but were not in each case strongly identified with the High Autonomy Factor.

CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

Summary of the Study

The purpose of this research project is to inform and facilitate further research concerning school site autonomy by the development, application, and analysis of a method of identifying differences in the autonomy of school buildings or sites in a number of school districts. Increased school site autonomy has been widely advocated and frequently adopted as a means of improving the organizational effectiveness of schools; yet empirical investigation of site autonomy has been very limited. Research concerning the determinants, correlates, and educational and organizational effects of variations in site autonomy is needed. The availability of an effective method of identifying differences in the autonomy of school sites could be expected to facilitate the progress of such research.

Development of the Method

School site autonomy has been defined as the extent to which decisions with respect to an individual school building or site are made specifically for that site independent of other schools in the district and are made by site level personnel at the individual school. The method of gathering information concerning the autonomy of school sites developed for this study involved obtaining the responses of school principals to the items of the School Site Autonomy Inventory by

means of a mailed survey. Site principals were selected as the persons in the best position to provide valid information concerning the autonomy of school sites. The structure and format of the Inventory was developed based upon the definition of school site autonomy. The items included in the Inventory were derived from the literature related to building or site-level decision authority and are presented as plausibly representative of the types of decisions identified in that literature as relevant to the operation of individual schools. Mailed survey techniques were adopted as a reasonably efficient means of gathering information from a number of school districts.

Application of the Method

The population to which the method was applied was United States school districts which enrolled 10,000 or more students and included four or more general function elementary school sites and four or more general function secondary school sites. From this population, 50 school districts were randomly selected to be included in the study. Within each of the districts, from four to fifteen principals of elementary sites and from four to fifteen principals of secondary sites were selected as potential respondents. A total of 1,106 principals were selected. The sample of districts and principals within districts was considered to be representative of the population defined for the study.

Initial and follow-up mailings of the survey instrument resulted in the receipts of useable responses from 556 principals or, 50.3% of the original sample. At least three Inventories from both elementary and secondary levels were received from principals from 48 of the 50 districts. Responses for these 48 districts, 96% of the original sample of districts, served as the data analyzed for this study. The

multiple responses from elementary and secondary levels from the 48 districts were considered to be sufficiently representative of the population of interest for purposes of the study.

Analysis

The analysis of the data obtained by the application of the method involved examination of the extent, dimensions and consistency of variations in site autonomy and consideration of the degree to which the data allowed for differentiating between school districts on the basis of the autonomy of their school sites. The analysis was conducted in an effort to answer the exploratory questions of the study.

Conclusions

Discussed below are the conclusions of the study with reference to the exploratory questions which the study investigated.

1. Do school principals report different levels of site autonomy and, if so, for which decisions are differences reported?

There are extensive differences in the levels of site autonomy reported by school principals. Wide differences are reported for almost all of the individual decision items. The type of decisions for which differences are most extensive are budget decisions. The decisions for which differences in autonomy are the smallest are most frequently personnel related decisions.

2. Do districts (i.e., principals from the same districts) report different levels of site autonomy and, if so, for which decisions are differences reported?

There are differences in the levels of autonomy reported by districts. Substantial differences exist for most of the individual decision items. For 55 of the 72 items the range of differences in the

district means is 3.00 or greater. As is true for individual responses, the decisions for which differences are the greatest are budget decisions.

3. Are there identifiable clusters of decisions based upon variations in levels of site autonomy and are any such clusters congruent with areas of administrative responsibility?

There are clusters of decisions based upon levels of site autonomy and such clusters are to be a substantial degree congruent with areas of administrative responsibility. Factor analysis resulted in the identification of a number of independent factors or decision clusters. On the basis of items grouped in the various clusters, five dimensions of variations in school site autonomy were defined. The first dimension is made up of a variety of items which may be considered a general dimension. The four more specifically defined dimensions include items related to budget, flexibility in the allocation of staff resources, curriculum content and materials, and selection of instructional personnel.

4. Does the degree of consensus within districts justify consideration of school site autonomy as a district characteristic?

There are individual decisions and groups of decisions for which levels of site autonomy may appropriately be considered as district characteristics. There is also some basis for considering the general or overall level of site autonomy as a district characteristic. When examined in a relative sense, the degree of within district consensus about autonomy provides justification for these conclusions.

Consensus in an absolute sense, as measured by within district standard deviations, does not provide a satisfactory basis for determining whether site autonomy is appropriately considered as a district

characteristic. For most items district standard deviations cover a wide range of values. Even though items do differ in terms of average within district consensus, for nearly all items there are high consensus districts and low consensus districts. The few items for which district consensus is uniformly high are also items for which consensus is high across districts or among principals generally. Because of these findings, no satisfactory answer to the question of autonomy as a district characteristic is provided by within district standard deviations.

Within district consistency or consensus about autonomy from a relative perspective is the portion of total differences or total variation that is explained by or attributable to differences between districts. Correlation ratios, as relative measures, indicate that for a group of budget decisions and for a number of other individual decisions a substantial portion, 40% of more, of the overall differences in levels of autonomy are between district differences. When level of autonomy is measured by multiple item scales rather than by individual items the portion of variation explained by district is again quite substantial, greater than one-third, for four of the five dimensions. Using a combination of the five scales as an overall or general measure of autonomy, more than half of the total variation in site autonomy is explained by differences between districts. These findings concerning the degree of relative consensus within districts support consideration of specific aspects of site autonomy and general levels of site autonomy as district characteristics.

5. Is the degree of consensus among elementary principals or secondary principals within districts greater than the degree of consensus among principals within districts as a whole?

The degree of within district consensus about levels of site autonomy is greater among elementary principals and among secondary principals than among district principals generally. Increased within district consistency is found for elementary and secondary levels using either within district item standard deviations or correlation ratios as measures of consistency. Elementary and secondary correlation ratios are also larger than district ratios for multiple item scale values.

6. Are there differences among school districts in the overall levels of site autonomy or average degrees of consensus about autonomy reported by principals?

There are definite differences among school districts in both overall levels of site autonomy and average degrees of consensus about autonomy. The means of the item means vary greatly among districts and the means of the item standard deviations are distinctly smaller for some districts than for others. Differentiation among the districts is also clearly demonstrated by the two types or clusters of districts identified by Q-type factor analysis procedures.

7. Do principals from districts which have claimed to be decentralized report higher levels of school site autonomy than principals from districts generally.

The levels of site autonomy reported by principals from reputedly decentralized districts are higher than the levels of autonomy reported by principals from most of the other districts. The two districts which have national reputations for providing extensive autonomy to school sites in fact report distinctly higher levels of autonomy than do any of the other districts. The levels of autonomy reported by the

districts which have a reputation for decentralization, but not specifically for site autonomy, are also comparatively high.

Implications

The purpose of this research project was to inform and facilitate further research concerning school site autonomy. In this section observations and opinions of this researcher concerning the implications of the findings of the present study for further research are presented for consideration. Presented first is an examination of whether the findings of the study support the assumption that reported differences in autonomy represent actual differences in experience rather than merely measurement error. This issue is significant if the method developed for this project is to be employed in future research. The findings of this study are discussed with reference to the research implications of differences in within district consensus; the appropriate unit analysis; the consistency of elementary and secondary responses; the multidimensionality of variations and the use of multiple item scales; the particular significance of differences in budget autonomy; and the further development of the School Site Autonomy Inventory.

Assumption of Actual Differences

A stated assumption of this research project has been that the differences in school site autonomy that were reported were not merely error variance or random measurement error but actually represented differences in the experiences of principals. It has not been assumed that differences that actually existed were necessarily identified but that differences which were identified represented actual differences.

Because the actuality of differences was assumed and not hypothesized, this study was not designed to provide any specific empirical test of such differences. On the other hand, the study has produced several findings which may be understood as providing a degree of support for the initial assumption.

In the first place, for nearly all of the items there were extensive differences in the district standard deviations. Secondly, for almost every item there were high or total consensus districts. Thirdly, the overall degree of consensus varied greatly from district to district. Measurement error would necessarily be a function of the item and might be assumed to be generally present across districts for a given item, yet the data indicates that consensus is to some degree a function of the district. The presence or absence of consensus for an item, i.e., the extent of within district variation, is not merely error variance but may be understood as substantially a result of the differences of experiences of principals within districts. To this degree the initial assumption is supported. The assumption that difference in site autonomy identified by responses to the School Site Autonomy Inventory represent real differences in the experiences of principals may be considered to be supported by the findings of the present study.

Differences in Consensus

The primary focus of this study has been differences in the autonomy of school sites. The analysis of the data has demonstrated that there are also differences in the degree of consensus about autonomy among the sites within the various districts. The fact that the average degree of consensus and the degree of consensus for

specific items varies considerably from district to district indicates that consensus about autonomy should be included as a covariate in investigation of differences in levels of autonomy. Future research should consider whether relationships between levels of site autonomy and other school variables are affected by the degree of consensus about autonomy within districts.

Unit of Analysis

The degree of consensus or within district consistency has also been considered in this study as a means of addressing the issue of the appropriate unit of analysis. The importance of adopting an appropriate unit of analysis has been argued in preceding chapters. It was proposed that the issue be resolved based upon the presence or absence of within district consistency or consensus concerning the level of autonomy. For school districts to be the unit of analysis for site autonomy research it was argued that autonomy must be demonstrated to be a characteristic of the organizational structure of districts rather than a characteristic specific to individual sites within districts. Within district consistency or consensus concerning autonomy was discussed as necessary to demonstrate that the level of site autonomy was in fact a structural characteristic of districts.

The findings of this study indicate that, when examined in a relative sense based upon the portion of total variation explained by between district differences, the level of site autonomy is substantially a district characteristic for (1) a number of individual decisions, especially those related to budget; (2) the district values for multiple item scales for the four specific dimensions of instructional personnel selection, curriculum content and materials,

staff resources flexibility, and budget; and (3) the general levels of autonomy as indicated by district values for a combined scale based upon separate dimensional scales. If the extent to which school sites are autonomous, at least for certain types of decisions, is substantially a function of the district in which a site is located, the research related to site autonomy may appropriately proceed using the school district as the unit of analysis. The decisions or dimensions investigated by such research should be those for which levels of site autonomy have been found to be extensively district determined.

Elementary and Secondary Consistency

The degree of relative consensus within districts justifies the acceptance of certain aspects of school site autonomy as district characteristics, the degree of consensus is greater if elementary and secondary levels within districts are considered separately. Also to be noted is that a particularly difficult aspect of the developmental phase of this project was creating instrument items which would be meaningful and significant at both elementary and secondary levels. For these reasons it would appear that future research concerning site autonomy should proceed in a level specific manner unless there are practical or theoretical reasons for including both elementary and secondary levels. Development of research tools such as the School Site Autonomy Inventory could be constructed more effectively in a level specific form and the resulting differentiation between districts could be expected to be more distinct.

Dimensional Scales

The findings of this study indicate that levels of site autonomy do not vary independently from decision to decision nor do they vary uniformly across all decisions. Site autonomy varies in terms of identifiable clusters decisions. Variations in site autonomy are multidimensional and future research should recognize and account for variations on these dimensions. Site autonomy research needs to investigate differences in budget autonomy, staff resources autonomy, curriculum content and materials autonomy, and instructional personnel selection autonomy as well as differences in autonomy with regard to other dimensions of variation which may be identified. Additional dimensions may be expected to be generally consistent with or explainable in terms of areas of administrative responsibility.

The measurement of levels of autonomy for the various dimensions or areas of responsibility should be on the basis of multiple item scales. The fact that the portion of total variation explained by between district differences is generally greater for dimensional scale values than for the individual items that make up the scale is an indication that definition or determination of levels of site autonomy within district organizational structures is more in terms of categories of decisions or areas of responsibility than in terms of specific decisions. Scales composed of a number of decision items identified with a particular dimension are therefore the most appropriate means of identifying differences in site autonomy among school districts.

Budget Autonomy

The area of decision making for which differences in site autonomy are the greatest and for which the levels of autonomy are most

clearly structured by the various districts is budgeting, or more generally, resource allocation. Future research related to site autonomy should specifically address the implications of differences in budget autonomy. Discussions of site autonomy in the literature have often emphasized the central importance of discretionary authority at the building level in matters of budgeting and resource allocation. The findings of this study indicate that school districts are clearly differentiated on the basis of this aspect of site autonomy. Whether the claimed benefits of site autonomy with regard to budget are in fact attained is an issue that appears to be eminently researchable using the method of identifying levels of autonomy developed for this project.

School Site Autonomy Inventory

The School Site Autonomy Inventory-Form III, the survey instrument used for this study, was adopted as a tentative tool for gathering information concerning the autonomy of school sites so that the extent, dimensions, and consistency of differences in autonomy could be examined and, based upon the findings, further research related to site autonomy informed and facilitated. The findings of this study have indicated that differences in site autonomy are in fact identified based upon the responses to the Inventory. The highest overall levels of autonomy were reported by principals from two districts which have national reputations for the extent of autonomy provided to their school sites. The validity of the autonomy claims of these districts and the validity of the School Site Autonomy Inventory as an instrument to identify differences in site autonomy would appear to be mutually supported by the noticeably high overall autonomy scores for these two districts.

The findings of this study also suggest directions which further development of the School Site Autonomy Inventory could follow. The directions indicated for further development are:

1. The basic structure and format of the Inventory is consistent with the concept of school site autonomy and could be maintained.

2. Separate forms of the Inventory could be constructed for specifically measuring levels of site autonomy among elementary and among secondary schools.

3. Forms of the Inventory to be developed could include a number of subscales which address the specific dimensions of variation identified by this study: budget, staff resources flexibility, curriculum content and materials, and instructional personnel selection.

4. Attempts could be made to identify additional dimensions of variations in site autonomy. Such attempts would include the gathering of additional data using the Inventory format and different decision items and the further examination of the intercorrelation of items used in Form III which were not included in one of the specific dimensions identified by this study.

5. Particular emphasis could be directed toward the creation of items, identification of dimensions, and the construction of subscales related to the general topic of resources allocation.

6. Decision items and subscales to be included in forms of the Inventory should be those for which variations are substantially district determined.

The School Site Autonomy Inventory-Form III has been demonstrated to be a valid instrument for identifying differences in levels of site autonomy. With the developments and refinements recommended above, future versions of the Inventory would provide a research tool of definite value for the investigation of school site autonomy.

Summary of the Implications

Increased autonomy of school sites has been widely advocated and adopted as a means of improving the organizational effectiveness of schools and yet there are few research findings upon which to base an evaluation of the actual rather than assumed implication of differences in autonomy. This project has attempted to inform and facilitate research related to site autonomy by the development, application, and analysis of a method of identifying differences in the autonomy of school sites in a number of school districts. The findings of this study indicate that there are extensive differences in the autonomy among school districts; that these differences are multidimensional; that for some decisions and types of decisions substantial portions of the total variations are explained by differences between districts; and that school districts may be empirically differentiated based upon the autonomy of their sites. The method of identifying differences in site autonomy developed, applied, and analyzed for this study has been demonstrated to be a sufficiently adequate research tool to justify its further development and its adoption for future empirical investigation of school site autonomy.

APPENDICES

APPENDIX A

COVER LETTERS

MICHIGAN STATE UNIVERSITY

COLLEGE OF EDUCATION
DEPARTMENT OF ADMINISTRATION AND HIGHER EDUCATION
ERICKSON HALL

EAST LANSING • MICHIGAN • 48824

February 1979

Dear Colleague:

We are presently involved in a research project to examine the decision autonomy of individual school buildings or sites within school districts. We hope that you can help us with this study.

The study is based upon a carefully selected sample of principals from districts throughout the United States. Therefore, your completion and return of the enclosed School Site Autonomy Inventory is essential to the success of the study. It should take about 15 minutes to complete the Inventory. A colored sheet of explanation, directions, and examples is provided and a business reply envelope is included for your convenience.

In order that responses may be grouped by districts for data analysis, a code number has been assigned to each instrument. Neither you, your school, nor your district will be identified in reporting the results of this study.

Your time and attention in this matter are greatly appreciated.

Sincerely,

Philip A. Cusick
Associate Professor

John M. Graves
Graduate Assistant

mg

Enclosures

MICHIGAN STATE UNIVERSITY

COLLEGE OF EDUCATION
DEPARTMENT OF ADMINISTRATION AND HIGHER EDUCATION
ERICKSON HALL

EAST LANSING · MICHIGAN · 48824

March 12, 1979

Dear Colleague:

Several weeks ago Dr. Philip Cusick and I sent a letter to you requesting your help in a study of the autonomy of individual school buildings or sites within school districts. If you have already responded to that request and your completed School Site Autonomy Inventory has not yet been received, please disregard this reminder and accept our thanks for your cooperation. If you have not yet found time in your busy schedule to complete and return the Inventory, I would like to take this opportunity to encourage you to do so at your earliest convenience.

As indicated in the previous letter, the study you are asked to take part in is based upon a carefully selected sample of principals from a limited number of districts throughout the United States. For the study to be successful, it is necessary to obtain responses from a number of principals at both the elementary and secondary levels from each of these districts. The type of data required is not available thru other sources, therefore we are dependent upon the participation of each of the principals selected. Your response is essential to the success of the study.

A copy of the School Site Autonomy Inventory; a sheet of explanations, directions, and examples; and a business reply envelope are enclosed. As stated in the earlier letter, neither you, your school, nor your district will be identified in the reporting of this study. Questions or comments concerning the study or requests for a summary report of the findings are welcome.

From my own experience as a principal I know there are many demands made upon your time. For this reason, your willingness to take a few minutes to make this study a success will be most appreciated.

Sincerely,

John M. Graves
Graduate Assistant

JG/mg

Enclosures

APPENDIX B

SCHOOL SITE AUTONOMY

INVENTORY-FORM III

EXPLANATION, DIRECTIONS, AND EXAMPLES FOR THE SCHOOL SITE AUTONOMY INVENTORY - FORM III

The purpose of this instrument is to gather information concerning the autonomy of individual school sites within school districts. A local school building or site is autonomous to the extent that decisions concerning budget, personnel, program, etc., are specifically made for the individual school rather than for some larger group of schools and are determined by persons at that local school. You are asked to respond to the specific decision or action items of the Inventory according to the following directions:

1. Read the item carefully.

2. (Question A.) Consider whether in your district such a matter is decided specifically for one individual school rather than for some larger number or group of schools.

> CIRCLE NO if the item is decided for a group of schools and is not decided specifically for the single school site. After circling NO, go on to Question A. for the next item. No response to Question B. is necessary if the answer to A. is NO.
>
> CIRCLE YES if the item is decided specifically for the individual school site. After circling YES, answer Question B. concerning the same item.

3. (Question B.) Consider to what extent such a matter is determined or decided by the SCHOOL, i.e., by persons from the individual school building or site, or by the DISTRICT, i.e., by persons above the building level in the district organization.

> CIRCLE THE NUMBER that indicates which of the categories below most appropriately describes how such an item is determined in your school district.
>
> | | | |
> |---|---|---|
> | 1 | BY DISTRICT-SCHOOL NOT INVOLVED | Determined by persons above the building level in the district organization without participation or involvement from the individual school. (School may be informed of the decision.) |
> | 2 | BY DISTRICT-SCHOOL INVOLVED OR CONSULTED | Determined primarily by persons above the building level with participation or involvement from, consultation with, and/or information provided by persons from the individual school. |
> | 3 | JOINTLY BY DISTRICT AND SCHOOL | Determined jointly by district and school with persons from both the individual school and the district level actively involved in the shared decision process. |
> | 4 | BY SCHOOL-DISTRICT INVOLVED OR CONSULTED | Determined primarily by persons at the individual school with participation or involvement from, consultation with, and/or information provided by persons from above the building level. |
> | 5 | BY SCHOOL-DISTRICT NOT INVOLVED | Determined by persons at the individual school without participation or involvement from persons above the building level. (District may be informed of the decision.) |
>
> After circling the appropriate number, go on to Question A. for the next item.

The following are examples of appropriate responses:

Example: *Within the district or a portion of the district, the same series of math textbooks is to be used by all elementary or all secondary schools. Therefore the matter is not decided for a single site.*

Select a new set of math textbooks.....(90) YES (NO) 1 2 3 4 5

Example: *When a vacancy occurs for the principalship of a building, district level officials make the decision without involving anyone from the school.*

Select a new principal for a building.....(91) (YES) NO (1) 2 3 4 5

Example: *An individual school is allocated a certain number of dollars per pupil for operating expenses for the next budget year. The principal has authority to decide the amount budgeted for each of the various categories such as teaching supplies, textbooks, library books, etc. The district office is merely informed how much of the building's allocated funds will be budgeted for each area.*

Determine what portion of the operational funds allocated to a site will be budgeted for purchase of library books.....(92) (YES) NO 1 2 3 4 (5)

SCHOOL SITE AUTONOMY INVENTORY - FORM III

Directions: Please circle the responses most appropriate for your school district.

A. Is this decided for single school site?		B. If the answer to A is YES, then how is the decision determined?				
		1	2	3	4	5
YES	NO	BY DISTRICT-SCHOOL NOT INVOLVED	BY DISTRICT-SCHOOL INVOLVED OR CONSULTED	JOINTLY BY DISTRICT AND SCHOOL	BY SCHOOL-DISTRICT INVOLVED OR CONSULTED	BY SCHOOL-DISTRICT NOT INVOLVED

From among final candidates, select person to fill a vacant teaching position....(01)	YES	NO	1	2	3	4	5
Combine social studies and science into an interdisciplinary block program.....(02)	YES	NO	1	2	3	4	5
Decide whether to involve parents in selection process for assistant principal...(03)	YES	NO	1	2	3	4	5
Place a written reprimand in the personnel file of a teacher observed using unwarranted corporal punishment.....(04)	YES	NO	1	2	3	4	5
Determine what library books will be purchased.....(05)	YES	NO	1	2	3	4	5
Obtain the dismissal of a teacher aide whose work is unsatisfactory.....(06)	YES	NO	1	2	3	4	5
Adopt teaching strategy for a subject area (e.g., inquiry, mastery learning).....(07)	YES	NO	1	2	3	4	5
Determine the subject and format of a three hour teacher inservice program.....(08)	YES	NO	1	2	3	4	5
Determine what portion of the operational funds allocated to a site for the coming year will be budgeted for purchase of textbooks.....(09)	YES	NO	1	2	3	4	5
Transfer some unexpended funds from textbook budget to teaching supplies budget..(10)	YES	NO	1	2	3	4	5
Within general guidelines, establish specific criteria for teacher evaluations...(11)	YES	NO	1	2	3	4	5
Send a teacher out-of-state to attend a two day instructional methods workshop...(12)	YES	NO	1	2	3	4	5
Not replace a teacher who has resigned and use equivalent funds to hire aides....(13)	YES	NO	1	2	3	4	5
Establish consequence or penalty for excessive student tardiness.....(14)	YES	NO	1	2	3	4	5
Modify basic organizational plan (e.g., flexible schedule, inter-age groups).....(15)	YES	NO	1	2	3	4	5
Establish the sequence of content for math classes.....(16)	YES	NO	1	2	3	4	5
Determine what club or activity programs will be available to students.....(17)	YES	NO	1	2	3	4	5
Determine what portion of the operational funds allocated to a site for the coming year will be budgeted for building maintenance and repair.....(18)	YES	NO	1	2	3	4	5
Determine how student progress will be reported to parents (letter grades, narratives, checklist, etc.).....(19)	YES	NO	1	2	3	4	5
Decide to use month, quarter, semester, or year scheduling periods.....(20)	YES	NO	1	2	3	4	5
Determine whether a first year teacher will be recommended to the board of education for continued employment or dismissal.....(21)	YES	NO	1	2	3	4	5
Not accept a substitute teacher whose previous service has been unsatisfactory...(22)	YES	NO	1	2	3	4	5
Decide to purchase a quantity of much needed physical education equipment during the coming year rather than replace a teacher who will be retiring.....(23)	YES	NO	1	2	3	4	5
Decide whether a parent or citizens advisory group will be involved in building level program planning and evaluation.....(24)	YES	NO	1	2	3	4	5
Add a counselor for next year instead of replacing a teacher who is leaving.....(25)	YES	NO	1	2	3	4	5
Have an office secretary's regular working hours begin one half hour earlier.....(26)	YES	NO	1	2	3	4	5
Determine what portion of the operational funds allocated to a site for the coming year will be budgeted for staff conference expenses.....(27)	YES	NO	1	2	3	4	5
Select the person who will serve as principal of a building.....(28)	YES	NO	1	2	3	4	5
Exchange teaching assignments between two appropriately certified teachers (e.g., English and history or second and fourth grades).....(29)	YES	NO	1	2	3	4	5
Include area citizens on an ad hoc committee to study school discipline.....(30)	YES	NO	1	2	3	4	5
Determine what portion of the operational funds allocated to a site for the coming year will be budgeted for purchase of equipment.....(31)	YES	NO	1	2	3	4	5
Organize or abandon a team teaching arrangement.....(32)	YES	NO	1	2	3	4	5
Use ability grouping of students for English or language arts instruction.....(33)	YES	NO	1	2	3	4	5
Decide if students may use electronic hand calculators in math classes.....(34)	YES	NO	1	2	3	4	5
Decrease proportion of teaching time allocated to social studies and increase the time allocated to teaching math.....(35)	YES	NO	1	2	3	4	5

YES	NO	1 BY DISTRICT-SCHOOL NOT INVOLVED	2 BY DISTRICT-SCHOOL INVOLVED OR CONSULTED	3 JOINTLY BY DISTRICT AND SCHOOL	4 BY SCHOOL-DISTRICT INVOLVED OR CONSULTED	5 BY SCHOOL-DISTRICT NOT INVOLVED

Determine amount of funds available during coming year for student field trips...(36) YES NO 1 2 3 4 5

Adopt a program of individualized instruction in math classes.....(37) YES NO 1 2 3 4 5

From a number of final candidates, select person to fill a teacher aide vacancy..(38) YES NO 1 2 3 4 5

Change student learning objectives for geography classes.....(39) YES NO 1 2 3 4 5

Grant request of local community group for evening use of school building.....(40) YES NO 1 2 3 4 5

Reject request for voluntary transfer to a site by a teacher from another site...(41) YES NO 1 2 3 4 5

Decide if teachers are required to periodically submit lesson plans for review...(42) YES NO 1 2 3 4 5

Transfer to science textbooks some unexpended social studies textbook funds.....(43) YES NO 1 2 3 4 5

Change custodians priority order for cleaning areas of a building.....(44) YES NO 1 2 3 4 5

Within state time guidelines, schedule class periods and recess or break times...(45) YES NO 1 2 3 4 5

Select a new set of science textbooks.....(46) YES NO 1 2 3 4 5

Eliminate a library clerical aide position and add lunch period supervisors.....(47) YES NO 1 2 3 4 5

Add 30% to next year's budget for art supplies by reducing amounts budgeted for supplies for other subject areas.....(48) YES NO 1 2 3 4 5

Transfer some unexpended funds from administrator salaries to teacher salaries...(49) YES NO 1 2 3 4 5

Determine what maintenance and repair needs will receive priority attention.....(50) YES NO 1 2 3 4 5

Decide if current social issues will be the focus of social studies instruction..(51) YES NO 1 2 3 4 5

Place a written reprimand in the personnel file of a food service employee observed violating established work rules.....(52) YES NO 1 2 3 4 5

Increase number of full-time equivalent teachers for the coming year by reducing budget allocations in non-personnel areas.....(53) YES NO 1 2 3 4 5

Purchase video tape recording equipment.....(54) YES NO 1 2 3 4 5

Select the basic series of books or materials to be used for reading program(s)..(55) YES NO 1 2 3 4 5

Establish grade level reading achievement goals.....(56) YES NO 1 2 3 4 5

Transfer some unexpended funds from new equipment budget to library book budget..(57) YES NO 1 2 3 4 5

Circulate a monthly newsletter of local school events.....(58) YES NO 1 2 3 4 5

Select the style of replacement furniture for several classrooms.....(59) YES NO 1 2 3 4 5

Determine what behaviors are serious enough to cause a student to be temporarily removed from a class.....(60) YES NO 1 2 3 4 5

When no vacancy is anticipated, eliminate a teaching position for the coming year and use the equivalent funds to hire several aides.....(61) YES NO 1 2 3 4 5

Determine minimum typing speed required for a building office clerical position..(62) YES NO 1 2 3 4 5

Carry over at least part of a budget surplus to next year's building budget.....(63) YES NO 1 2 3 4 5

Adopt new standards for student dress and appearance.....(64) YES NO 1 2 3 4 5

Buy a new set of maps of Latin America.....(65) YES NO 1 2 3 4 5

Assign a student to a particular teacher or class.....(66) YES NO 1 2 3 4 5

Transfer some unexpended funds from aide salaries budget to staff travel budget..(67) YES NO 1 2 3 4 5

Obtain the services of a consultant, not on the district staff, to assist teachers in the development of content area reading skills.....(68) YES NO 1 2 3 4 5

Alter an existing health program to include a new drug education unit.....(69) YES NO 1 2 3 4 5

Determine areas of primary responsibility for an assistant principal.....(70) YES NO 1 2 3 4 5

Select brand X science lab supplies rather than brand Y used previously.....(71) YES NO 1 2 3 4 5

Decide if students may leave the school grounds during lunch periods.....(72) YES NO 1 2 3 4 5

INSTRUMENT NUMBER

APPENDIX C

ENROLLMENTS, SCHOOL SITES, AND RESPONSE PERCENTAGES FOR SAMPLE DISTRICTS

Table C.1.--District enrollment, number of school sites, number of principals surveyed, and response rates for sample districts

District					Sample								
		School Sites			Elementary			Secondary			Total District		
No.	Enroll.#	Tot.	K-6	7-12	Sent	Resp.	Pct.	Sent	Resp.	Pct.	Sent	Resp.	Pct.
01	25,000	36	23	6	15	7	46.7	6	6	100.0	21	13	61.9
02	50,000	104	72	18	15	6	40.0	15	4	26.7	30	10	33.3
03	20,000	36	23	7	15	7	46.7	7	4*	57.1	22	11	50.0
04	35,000	40	34	5	15	4	26.6	5	4	80.0	20	8	40.0
05	20,000	32	24	8	15	4	26.6	8	5	62.5	23	9	39.1
06	25,000	38	19	5	15	9	60.0	5	4	80.0	20	13	65.0
07	25,000	35	26	6	15	7	46.7	6	5	83.3	21	12	57.1
08	120,000	162	67	54	14	5	35.7	15	5	33.3	29	10	34.5
09	25,000	42	24	4	15	8	53.3	4	3	75.0	19	11	57.9
10	30,000	39	19	5	15	9	60.0	5	4	80.0	20	13	65.0
11	10,000	22	15	5	15	5	33.3	5	3	60.0	20	8	40.0
12	50,000	68	48	18	15	10	66.7	15	4	26.7	30	14	46.7
13	10,000	25	15	6	15	8	53.3	6	5	83.3	21	13	61.9
14	10,000	14	9	5	9	5	55.6	5	3	60.0	14	8	57.1
15	15,000	31	18	6	15	11	73.3	6	4	66.7	21	15	71.4
16	10,000	22	14	4	15	7	46.7	5	3	60.0	20	10	50.0
17	15,000	30	23	7	15	5	33.3	7	5	71.4	22	10	45.5
18	40,000	47	30	4	15	8	53.3	4	3	75.0	19	11	57.9
19	10,000	23	11	6	11	8	72.7	6	3*	50.0	17	11	64.7
20	20,000	45	29	14	15	5	33.3	14	9	64.3	29	14	48.3
21	70,000	85	56	20	15	4*	26.6	15	9	60.0	30	13	43.3
22	30,000	38	19	8	15	8	53.3	8	4	50.0	23	12	52.2
23	10,000	18	10	6	10	5*	50.0	6	3	50.0	16	8	50.0
24	30,000	36	18	4	15	7	46.7	4	3	75.0	19	10	52.6
25	20,000	25	20	4	15	6*	40.0	4	4	100.0	19	10	52.6
26	65,000	113	76	20	15	6	40.0	15	4	26.6	30	10	33.3
27	30,000	37	25	13	15	10	66.7	13	7	53.8	28	17	60.7
28	20,000	32	20	7	15	3*	20.0	7	3	42.9	22	6	27.3
29	15,000	30	21	7	15	5	33.3	7	5	71.4	22	10	45.5
30	20,000	33	22	7	15	5	33.3	7	4	57.1	22	9	40.9
31	40,000	77	49	20	15	8*	53.3	15	10	66.7	30	18	60.0
32	55,000	54	28	13	15	4	26.6	13	7	53.8	28	11	39.3
33	30,000	47	28	8	15	8	53.3	8	5	62.5	23	13	56.5
34	15,000	34	20	5	15	10*	66.7	5	4	80.0	20	14	70.0
35	15,000	27	20	4	15	9	60.0	4	3	75.0	19	12	63.2
36	20,000	37	27	9	15	7	46.7	9	8	88.9	24	15	62.5
37	30,000	58	45	9	15	7*	46.7	9	6*	66.7	24	13	54.2
38	20,000	29	18	4	15	8	53.3	4	4	100.0	19	12	63.2
39	15,000	43	23	6	15	5	33.3	6	3	50.0	21	8	38.1
40	10,000	23	7	6	7	5	71.4	6	3	50.0	13	8	61.6
41	70,000	113	77	25	15	10*	66.7	15	5	33.3	30	15	50.0
42	15,000	29	20	8	15	5*	33.3	8	5	62.5	23	10	43.5
43	10,000	13	8	4	8	5	62.5	4	3	75.0	12	8	66.7
44	35,000	39	24	6	15	8	53.3	6	4	66.7	21	12	57.1
45	75,000	118	43	18	15	4	26.6	14	8	57.1	29	12	41.4
46	10,000	25	19	4	10	8	80.0	4	3	75.0	14	11	78.6
47	30,000	40	26	8	15	10*	66.7	6	4	66.7	21	14	66.7
48	40,000	41	21	12	15	5	33.3	12	5	41.7	27	10	37.0
Data Analysis Districts					684	323	47.2	383	222	58.0	1067	545	51.1
49@	10,000	22	11	6	11	3	27.3	6	2*	33.3	17	5	29.4
50@	15,000	26	15	7	15	4	26.6	7	2	28.6	22	6	27.3
All Sample Districts					710	330	46.5	396	226	57.1	1106	556	50.3

#1977 district enrollment rounded to the nearest 5,000

*An unusable response was received but not included

@Districts not included in analysis due to insufficient responses

APPENDIX D

EXPLANATION OF THE STANDARD DEVIATION VALUES RANGES

EXPLANATION OF THE STANDARD DEVIATION VALUE RANGES

The scale of response options used during this research ranged from 0 to 5. Given this potential range of values, standard deviations as measures of dispersion of responses have a potential range of from 0.00 to 2.89 when n = 3 or n = 4. As the size of n increases the maximum value of the standard deviation approaches 2.50. The maximum standard deviation is the value of the statistic given the greatest possible dispersion of scores which occurs when all cases are 0 or 5 and there are n/2 responses for each of the two categories. The maximum values are included in the range of standard deviations described as extreme dispersion (SD = 2.26 or more).

Another type of distribution of responses that has intuitive meaning is a rectangular distribution or an equal number of responses (n/6) in each category. The standard deviation for a rectangular distribution for a 0 to 5 scale ranges from 1.71 to 1.87 depending on the value of n. These values are near the center of the range of standard deviations described as general dispersion (SD = 1.51 to 2.25).

As the standard deviation value decreases below 1.50 toward total concensus (SD = 0.00), there are no intuitively meaningful distributions to guide definition of the ranges of values. Throughout the potential range of standard deviations there exist multiple distributions that might provide a given standard deviation value. In order to provide some basis for discussion, the range of values from 0.01 to 1.50 was divided at 0.75 and the values below and including 0.75 (SD = 0.01 to 0.75) described as high consensus and values above 0.75 (SD = 0.76 to 1.50) described as limited consensus. The value ranges are as follows:

0.00	Total Consensus	(Tot. Con.)
0.01 to 0.75	High Consensus	(High Con.)
0.76 to 1.50	Limited Consensus	(Lmt. Con.)
1.51 to 2.25	General Dispersion	(Gen. Dis.)
2.26 or more	Extreme Dispersion	(Ext. Dis.)

Because the number of respondents in some of the groups was as small as three, the standard deviation of responses within a group was in some cases necessarily very sensitive to a deviant response from an

individual respondent. To determine to what degree standard deviations were a function of the number of responses from a district or elementary or secondary level from a district, the number of responses from each district and from each level in the distribution were correlated with the average standard deviation for that particular group. Table D.1 presents these correlations.

Table D.1.--Correlations of number of group responses with average standard deviation of group responses

	r	r^2
District	.157	.025
Elementary	.128	.016
Secondary	.286	.082

It is interesting to note that the small correlations that do exist are positive rather than negative. In other words, to the limited extent that number of responses does explain the size of the standard deviations (2.5%, 1.6%, and 8.2%), smaller standard deviations are associated with fewer respondents. One may conclude that the standard deviations as measures of the presence or absence of consensus were not excessively unstable due to the limited number of respondents in some groups.

APPENDIX E

FACTOR MATRIX

Table E.1.--Factor matrix of 72 items, principal factoring with varimax rotation

Item	Item Indicator	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
01	select teacher from finalists	.328	.240	.090	.051	.539*
02	social studies/science block	.242	.189	.232	.295	-.000
03	parents in on asst. prin. selection	.154	.264	.273	.143	.228
04	file reprimand of teacher	.439*	.087	.056	.079	.122
05	library books to be purchased	.442*	.182	-.011	.143	.161
06	dismissal of teacher aide	.419	.120	.083	.045	.333
07	teaching strategy for subject	.478	.240	.007	.360	.050
08	three hour inservice program	.344	.206	.130	.230	.160
09	portion of budget for textbooks	.084	.736*	.125	.101	.119
10	textbook funds to supplies	.146	.772*	.078	.154	-.025
11	criteria for teacher evaluation	-.036	.011	.256	.238	.208
12	teacher to out-of-state workshop	.182	.162	.281	.142	.172
13	not replace teacher, hire aides	.170	.213	.574*	.086	.171
14	penalty for student tardiness	.402*	.132	.087	.171	.129
15	modify basic organizational plan	.429	.116	.084	.293	-.046
16	sequence of content for math	.121	.097	.146	.458*	.071
17	student club-activity program	.649*	.063	-.024	.133	.011
18	portion of budget for maintenance	-.060	.245	.265	.096	.361
19	student progress report method	-.087	.098	.207	.357	.287
20	length of scheduling periods	-.055	.199	.245	.344	.266
21	first year teacher recommendation	.451	.104	.005	.016	.297
22	not accept substitute teacher	.577*	.052	-.018	.013	.196
23	not replace teacher, buy equipment	-.032	.155	.683*	.111	.092
24	citizens in program planning	.270	.090	.081	.083	.260
25	not replace teacher, add counselor	.127	.124	.680	.098	.074
26	secretary's working hours	.449*	.130	.145	.012	.213
27	portion of budget for conferences	.161	.574*	.346	.068	.129
28	selection of principal	-.116	.066	.288	.055	.263
29	exchange teaching assignments	.596*	.139	.066	.008	.068
30	citizens on discipline committee	.477*	.198	.138	.061	.137
31	portion of budget for equipment	.201	.649*	.172	.043	.236
32	team teaching arrangement	.700*	.199	.036	.030	.060
33	ability grouping for language arts	.571*	.129	.012	.134	.072
34	hand calculators in math classes	.622*	.088	.119	.178	-.002
35	time for social studies and math	.224	.234	.228	.173	.007
36	funds for student field trips	.167	.370	.314	.175	.166
37	math individualized instruction	.584*	.154	.072	.275	.006
38	select teacher aide from finalists	.416	.281	.126	-.026	.464*
39	geography learning objectives	.306	-.073	.193	.495*	-.058
40	community group use of building	.270	.046	.068	.029	.380
41	reject teacher transfer request	.161	.158	.093	.084	.506*
42	teachers submit lesson plans	.578*	.097	-.023	.007	.103
43	science text funds to soc. studies	.245	.702*	.119	.186	.061
44	custodians cleaning priority	.435*	-.090	-.085	.018	.219
45	schedule class periods and breaks	.614*	.006	-.025	.021	.009
46	select science textbooks	-.016	.347	.157	.552*	.186
47	cut aide, add lunch supervisor	.124	.232	.529*	.080	.199
48	shift supplies budget to art	.328	.584*	.161	.110	.226
49	admin. salary funds to teachers	-.155	.077	.505*	.130	.074
50	maintenance and repair priorities	.168	-.050	.091	.153	.397
51	focus of social studies instruction	.317	.102	.199	.414	.013
52	food service employee reprimand	.409	-.057	.019	.047	.217
53	shift budget to increase teachers	-.099	.100	.633*	.185	.058
54	purchase video tape recorder	.411	.276	.102	.190	.271
55	basic reading books and materials	-.006	.304	.119	.602*	.202
56	grade reading achievement goals	.184	.071	.112	.454*	-.001
57	equipment funds to library books	.192	.696*	.238	.080	.050
58	circulate monthly newsletter	.668*	.087	-.070	-.090	-.006
59	style of replacement furniture	.212	.304	.193	.097	.352
60	student removed from class	.542*	.047	.016	.062	.156
61	eliminate teacher, hire aides	.074	.117	.644*	.121	.121
62	minimum typing speed for secretary	.201	.100	.167	-.013	.374
63	carryover building budget surplus	.036	.448*	.186	.122	.093
64	student appearance standards	.198	-.077	.245	.175	.185
65	buy new set of maps	.570*	.308	.021	.135	.061
66	assign student to teacher or class	.783*	.048	-.094	-.020	-.040
67	aide salary funds to staff travel	-.005	.292	.557*	.185	-.084
68	obtain consultant services	.223	.281	.253	.235	.244
69	new drug education unit	.315	.209	.232	.408	.103
70	responsibilities of asst. prin.	.410*	.024	.170	.176	.152
71	select brand of lab supplies	.227	.338	.104	.267	.251
72	students leave school at lunch	.274	.147	.105	.174	.007

NOTE: The five factors together account for 39.7% of the variance with the first factor accounting for 21.8%, the second 8.2%, the third 3.7%, the fourth 3.3%, and the fifth 2.7%.

*loading sufficient to accept item as identifiable with the factor.

APPENDIX F

COMPARISONS OF WITHIN DISTRICT CONSENSUS AND RELATIVE CONSISTENCY FOR DISTRICT, ELEMENTARY, AND SECONDARY GROUPS

Table F.1.--Item numbers, means, and frequency distributions for standard (N = 48) deviations of responses from districts and elementary and secondary groups within districts

		Mean SD	Frequency Distribution				
			Tot. Con.	High Con.	Lmt. Con.	Gen. Dis.	Ext. Dis.
Item 01	Dist.	1.20	0	10	26	12	0
	Elem.	1.22	0	11	23	13	1
	Sec.	0.97	7	12	19	8	2
Item 02	Dist.	1.79	1	1	5	37	4
	Elem.	1.72	4	2	6	27	9
	Sec.	1.52	7	3	8	20	10
Item 03	Dist.	1.03	9	8	16	14	1
	Elem.	0.91	14	8	13	10	3
	Sec.	0.93	17	4	13	9	5
Item 04	Dist.	1.47	0	4	15	28	1
	Elem.	1.46	0	7	13	27	1
	Sec.	1.29	3	13	13	13	6
Item 05	Dist.	1.37	0	10	15	22	1
	Elem.	1.17	4	11	13	18	2
	Sec.	1.21	7	10	14	10	7
Item 06	Dist.	1.12	0	11	27	10	0
	Elem.	1.15	3	7	23	15	0
	Sec.	0.94	1	23	15	7	2
Item 07	Dist.	1.56	0	2	17	27	2
	Elem.	1.54	0	4	14	26	4
	Sec.	1.29	3	11	16	11	7
Item 08	Dist.	1.68	0	1	12	34	1
	Elem.	1.62	1	2	14	28	3
	Sec.	1.52	1	6	12	22	7
Item 09	Dist.	1.27	1	5	23	19	0
	Elem.	1.20	3	10	16	17	2
	Sec.	1.16	7	10	13	14	4
Item 10	Dist.	1.20	3	9	17	17	2
	Elem.	1.05	10	11	10	15	2
	Sec.	1.01	10	11	14	9	4
Item 11	Dist.	1.46	0	2	21	25	0
	Elem.	1.47	1	4	21	19	3
	Sec.	1.31	5	3	23	12	5
Item 12	Dist.	1.44	0	3	24	21	0
	Elem.	1.46	1	4	20	21	2
	Sec.	1.18	3	13	14	15	3
Item 13	Dist.	1.24	2	5	26	15	0
	Elem.	1.47	1	4	21	19	3
	Sec.	1.31	5	3	23	12	5
Item 14	Dist.	1.62	0	4	13	28	3
	Elem.	1.66	1	5	9	24	9
	Sec.	1.18	7	13	9	13	6
Item 15	Dist.	1.51	0	5	15	27	1
	Elem.	1.39	1	10	13	18	6
	Sec.	1.35	2	11	11	19	5
Item 16	Dist.	1.70	0	1	11	35	1
	Elem.	1.72	1	2	10	29	6
	Sec.	1.44	3	3	21	15	6
Item 17	Dist.	1.40	0	8	18	20	2
	Elem.	1.45	0	10	11	23	4
	Sec.	0.93	12	16	6	9	5
Item 18	Dist.	1.07	0	16	22	10	0
	Elem.	0.85	5	17	19	6	1
	Sec.	1.14	4	10	22	8	4
Item 19	Dist.	1.42	0	3	23	22	0
	Elem.	1.19	3	4	23	18	0
	Sec.	1.41	4	3	21	14	6
Item 20	Dist.	1.33	2	4	22	20	0
	Elem.	1.03	9	6	21	10	2
	Sec.	1.35	7	4	15	19	3
Item 21	Dist.	1.17	0	5	32	11	0
	Elem.	1.19	0	8	26	13	1
	Sec.	0.96	4	17	17	9	1
Item 22	Dist.	1.37	0	8	18	20	2
	Elem.	1.37	2	9	12	22	3
	Sec.	1.04	10	12	12	10	4
Item 23	Dist.	1.04	3	7	31	6	1
	Elem.	0.82	13	10	19	4	2
	Sec.	1.06	12	4	22	8	2
Item 24	Dist.	1.79	0	1	6	41	0
	Elem.	1.61	1	6	6	31	4
	Sec.	1.54	1	8	10	23	6
Item 25	Dist.	1.38	1	6	20	21	0
	Elem.	1.00	9	9	20	9	1
	Sec.	1.40	5	2	17	19	5
Item 26	Dist.	1.86	0	3	4	38	3
	Elem.	1.81	0	4	6	32	6
	Sec.	1.33	8	10	7	13	10
Item 27	Dist.	1.32	3	11	9	22	3
	Elem.	1.09	8	12	9	17	2
	Sec.	1.40	7	6	13	12	10
Item 28	Dist.	0.82	0	23	23	2	0
	Elem.	0.80	0	30	14	3	1
	Sec.	0.80	5	18	24	0	1
Item 29	Dist.	1.54	0	3	14	28	3
	Elem.	1.45	2	4	16	22	4
	Sec.	1.34	3	11	14	10	10
Item 30	Dist.	1.67	0	3	9	34	2
	Elem.	1.71	1	2	9	29	7
	Sec.	1.50	3	11	14	10	10
Item 31	Dist.	1.48	0	5	18	25	0
	Elem.	1.35	2	8	16	20	2
	Sec.	1.38	4	8	15	15	6
Item 32	Dist.	1.33	0	7	19	22	0
	Elem.	1.25	2	11	16	16	3
	Sec.	1.08	4	16	14	9	5
Item 33	Dist.	1.39	0	6	22	20	0
	Elem.	1.20	3	17	7	17	4
	Sec.	1.17	3	16	14	11	4
Item 34	Dist.	1.43	2	3	22	19	2
	Elem.	1.43	3	8	12	17	8
	Sec.	1.06	10	10	13	10	5
Item 35	Dist.	1.72	0	4	9	31	4
	Elem.	1.60	5	3	7	24	9
	Sec.	1.43	6	3	17	17	5
Item 36	Dist.	1.58	1	7	10	24	6
	Elem.	1.37	6	7	11	15	9
	Sec.	1.40	6	8	12	11	11

Table F.1.--Continued

		Mean SD	Frequency Distribution				
			Tot. Con.	High Con.	Lmt. Con.	Gen. Dis.	Ext. Dis.
Item 37	Dist.	1.40	0	7	20	21	0
	Elem.	1.36	1	10	13	20	4
	Sec.	1.17	4	19	8	10	7
Item 38	Dist.	1.14	0	14	18	16	0
	Elem.	1.03	2	18	14	13	1
	Sec.	1.07	3	18	16	6	5
Item 39	Dist.	1.80	1	0	3	40	3
	Elem	1.85	1	0	6	35	6
	Sec.	1.52	3	8	12	15	10
Item 40	Dist.	1.40	0	5	20	23	0
	Elem.	1.27	1	7	20	19	1
	Sec.	1.33	3	9	14	18	4
Item 41	Dist.	1.45	0	2	22	24	0
	Elem.	1.36	2	6	18	21	1
	Sec.	1.28	2	10	18	16	2
Item 42	Dist.	1.46	1	6	16	25	0
	Elem.	1.51	2	5	12	23	6
	Sec.	1.42	11	9	10	11	7
Item 43	Dist.	1.39	1	11	13	18	5
	Elem.	1.22	8	12	8	12	8
	Sec.	1.11	10	11	10	9	8
Item 44	Dist.	1.35	1	8	16	22	1
	Elem.	1.30	5	12	5	23	3
	Sec.	1.12	7	13	13	12	3
Item 45	Dist.	1.28	0	9	25	12	2
	Elem.	0.97	7	16	9	13	3
	Sec.	1.28	3	16	12	4	13
Item 46	Dist.	1.47	0	1	22	25	0
	Elem.	1.29	1	5	26	16	0
	Sec.	1.28	2	12	14	19	1
Item 47	Dist.	1.55	1	3	15	27	2
	Elem.	1.21	9	3	14	18	4
	Sec.	1.46	5	5	16	11	11
Item 48	Dist.	1.58	0	9	12	14	13
	Elem.	1.43	5	10	7	14	12
	Sec.	1.27	7	14	7	11	9
Item 49	Dist.	0.44	13	27	7	1	0
	Elem.	0.29	26	17	4	0	1
	Sec.	0.45	23	15	6	3	1
Item 50	Dist.	1.54	0	0	19	29	0
	Elem.	1.55	0	3	19	23	3
	Sec.	1.24	3	6	22	16	1
Item 51	Dist.	1.82	0	2	3	42	1
	Elem.	1.85	0	3	3	35	7
	Sec.	1.48	3	6	14	18	7
Item 52	Dist.	1.53	0	3	16	29	0
	Elem.	1.49	0	7	13	26	2
	Sec.	1.35	1	13	16	12	6
Item 53	Dist.	0.91	5	15	20	8	0
	Elem.	0.62	19	11	13	4	1
	Sec.	0.96	12	7	18	10	1
Item 54	Dist.	1.51	0	4	20	22	2
	Elem.	1.49	1	9	11	22	5
	Sec.	1.13	3	14	18	11	2
Item 55	Dist.	1.48	0	3	19	26	0
	Elem.	1.82	4	5	26	13	0
	Sec.	1.48	1	9	12	19	7
Item 56	Dist.	1.70	0	2	6	38	2
	Elem.	1.73	0	2	10	30	6
	Sec.	1.52	3	3	17	18	7
Item 57	Dist.	1.38	2	7	15	21	3
	Elem.	1.26	10	6	9	17	6
	Sec.	1.21	6	13	14	8	7
Item 58	Dist.	1.23	5	7	17	18	1
	Elem.	1.09	14	4	10	18	2
	Sec.	1.02	18	7	5	7	11
Item 59	Dist.	1.61	0	3	13	32	0
	Elem.	1.62	0	4	11	28	5
	Sec.	1.39	1	7	18	19	3
Item 60	Dist.	1.43	0	7	15	25	1
	Elem.	1.42	1	9	12	22	4
	Sec.	1.21	4	14	13	12	5
Item 61	Dist.	1.19	2	10	20	15	1
	Elem.	0.86	12	10	18	7	1
	Sec.	1.15	9	9	9	20	1
Item 62	Dist.	1.40	4	7	11	20	6
	Elem.	1.25	8	10	7	14	9
	Sec.	1.33	9	7	10	10	12
Item 63	Dist.	1.06	5	12	16	15	0
	Elem.	0.90	15	9	8	15	1
	Sec.	0.90	14	13	9	9	3
Item 64	Dist.	1.81	0	1	4	41	2
	Elem.	1.71	1	2	14	23	8
	Sec.	1.66	2	7	8	20	11
Item 65	Dist.	1.27	2	10	16	18	2
	Elem.	1.13	7	11	10	18	2
	Sec.	1.00	16	4	13	10	5
Item 66	Dist.	0.83	15	8	15	10	0
	Elem.	0.73	25	5	5	11	2
	Sec.	0.60	30	4	3	7	4
Item 67	Dist.	0.93	5	18	13	11	1
	Elem.	0.68	18	12	7	10	1
	Sec.	0.76	19	12	7	5	5
Item 68	Dist.	1.60	0	0	16	32	0
	Elem.	1.55	2	3	14	27	2
	Sec.	1.38	1	13	8	21	5
Item 69	Dist.	1.67	0	2	11	35	0
	Elem.	1.60	1	5	11	25	6
	Sec.	1.38	1	13	8	21	5
Item 70	Dist.	1.72	0	1	11	34	2
	Elem.	1.60	2	3	12	28	3
	Sec.	1.33	4	11	13	15	5
Item 71	Dist.	1.72	0	1	12	32	3
	Elem.	1.61	2	3	13	22	8
	Sec.	1.54	2	5	16	19	6
Item 72	Dist.	1.89	0	2	5	33	8
	Elem.	1.73	1	6	7	20	14
	Sec.	1.87	0	2	37	8	1

Table F.2.--Item indicators and a descending array of district correlation ratios, η^2, along with elementary and secondary ratios for the 48 districts for 72 items

Item	Item Indicator	Correlation Ratios, η^2			Item	Item Indicator	Correlation Ratios, η^2		
		Dist.	Elem.	Sec.			Dist.	Elem.	Sec.
10	textbook funds to supplies	.621	.662	.713	64	student appearance standards	.231	.300	.352
09	portion of budget for textbooks	.593	.610	.654	30	citizens on discipline committee	.225	.297	.269
43	science text funds to soc. studies	.576	.626	.664	69	new drug education unit	.216	.286	.355
63	carryover building budget surplus	.546	.564	.666	02	social studies/science block	.214	.275	.391
57	equipment funds to library books	.531	.546	.629	53	shift budget to increase teachers	.211	.270	.312
31	portion of budget for equipment	.494	.563	.530	56	grade reading achievement goals	.208	.274	.297
27	portion of budget for conferences	.473	.577	.503	06	dismissal of teacher aide	.207	.232	.356
48	shift supplies budget to art	.461	.524	.563	16	sequence of content for math	.201	.226	.384
62	minimum typing speed for secretary	.455	.512	.549	20	length of scheduling periods	.200	.272	.320
38	select teacher aide from finalists	.452	.545	.504	26	secretary's working hours	.190	.306	.287
13	not replace teacher, hire aides	.419	.458	.552	18	portion of budget for maintenance	.189	.306	.296
36	funds for student field trips	.401	.498	.493	39	geography learning objectives	.188	.241	.335
46	select science textbooks	.398	.538	.485	51	focus of social studies instruction	.186	.243	.309
67	aide salary funds to staff travel	.389	.466	.569	52	food service employee reprimand	.179	.237	.324
01	select teacher from finalists	.368	.409	.506	24	citizens in program planning	.179	.285	.322
55	basic reading books and materials	.367	.544	.371	42	teachers submit lesson plans	.174	.197	.287
03	parents in on asst. prin. selection	.360	.374	.480	21	first year teacher recommendation	.174	.226	.327
40	community group use of building	.330	.387	.418	34	hand calculators in math classes	.169	.204	.323
44	custodians cleaning priority	.302	.376	.343	28	selection of principal	.167	.239	.324
12	teacher to out-of-state workshop	.302	.283	.516	11	criteria for teacher evaluation	.165	.191	.316
68	obtain consultant services	.293	.355	.453	07	teaching strategy for subject	.162	.223	.327
19	student progress report method	.286	.439	.341	70	responsibilities of asst. prin.	.162	.286	.274
59	style of replacement furniture	.281	.305	.451	15	modify basic organizational plan	.157	.228	.340
47	cut aide, add lunch supervisor	.276	.373	.464	33	ability grouping for language arts	.156	.272	.367
35	time for social studies and math	.272	.378	.391	17	student club-activity program	.151	.252	.244
71	select brand of lab supplies	.257	.375	.303	50	maintenance and repair priorities	.149	.152	.412
25	not replace teacher, add couselor	.257	.314	.453	22	not accept substitute teacher	.146	.237	.247
41	reject teacher transfer request	.254	.331	.364	32	team teaching arrangement	.144	.229	.281
61	eliminate teacher, hire aides	.251	.246	.471	49	admin. salary funds to teachers	.136	.224	.210
54	purchase video tape recorder	.248	.319	.390	04	file reprimand of teacher	.135	.170	.295
14	penalty for student tardiness	.246	.320	.388	37	math individualized instruction	.134	.167	.263
72	students leave school at lunch	.238	.334	.338	45	schedule class periods and breaks	.133	.240	.250
08	three hour inservice program	.234	.314	.365	60	student removed from class	.127	.222	.219
23	not replace teacher, buy equipment	.233	.246	.426	29	exchange teaching assignments	.119	.137	.316
65	buy new set of maps	.232	.399	.275	58	circulate monthly newsletter	.097	.164	.178
05	library books to be purchased	.232	.396	.308	66	assign student to teacher or class	.087	.154	.190

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