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ABSTRACT

General interest in decentralized decision-making in education is increasing in both Canada and the United States. This paper attempts a preliminary study of school-based management, which shifts some budgetary decision-making authority from the central office to individual schools. Although many academic specialties have explored decentralization of public services, there is a dearth of empirical research on school-based management. After exploring theoretical perspectives and research questions, particularly the work of Milton Friedman, Henry Mintzberg, and Herbert Simon, this paper discusses two reasons for decentralization in educational organizations: increased accountability and efficiency. Two Canadian school districts, Edmonton Public Schools (Alberta) and Langley School District (British Columbia) were studied to determine the structure, decision-making flexibility, accountability, and efficiency of school-based management. Results showed both districts to be considerably decentralized organizationally, if not politically. A high level of decision-making flexibility and a fair amount of accountability seem to have been achieved. The greatest impact was on the principal, who enjoys decentralization and is perceived as more powerful. Teacher satisfaction is moderately positive. Efficiency appears to have improved, as evidenced in increased levels of service and higher student and parent satisfaction. Further research is needed to substantiate these results. Included is a bibliography of 46 references. (MLH)

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A PRELIMINARY INQUIRY INTO SCHOOL-BASED MANAGEMENT

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I. INTRODUCTION

The objective of this research was to conduct a preliminary study of school-based management, defined as the delegation of authority to make some of the budgetary decisions from the central office to the school. Part of the decentralization phenomenon, its aims include an increase in educational accountability and more flexible decisionmaking of school site personnel. Full-scale school-based management entails the allocation of lump-sum dollars to schools, with which they budget to purchase personnel, equipment, and supplies with few restrictions.

Background

The extent to which the delivery of public services may be decentralized profitably has been a question of great concern to a number of academic specialties. For instance, organization theorists and political economists have probed for the apparent advantages and disadvantages of centralization-decentralization (Simon, 1957). They have commented on decentralization's two main forms, which appear to be political [where groups of the public are given power to make decisions] and bureaucratic [where decisions are delegated but subject to revision and even recall of the delegation] (Altschuler, 1970). They have also illuminated the differing extent to which decisions are made vertically and horizontally in any organization, and clarified the fact that different kinds of decisions may be decentralized in different organizations (Mintzberg, 1979).

Writers within the literature on education have addressed the decentralization issues as well. They include Garms, Guthrie, and Pierce (1978) who posit that the foundations of educational finance and the centralization question rest on three primary values: liberty, equality, and efficiency.

The research on effective schools appears to support certain facets of district decentralization. Particularly, Goodlad (1984) encourages a greater degree of parental involvement in school governance and also more power for principals and teachers. He sees the need for the capability of school renewal and argues for a year-long agenda for school improvement (Goodlad 1984:276). Central to his proposal is the existence of a planning group in the school and the ability of schools to have control over their own budgets. Thus all expenditures, including those for staffing,

could be made more flexibly.

General interest in decentralized decisionmaking in education appears to be increasing. Specifically, a number of reports and commentaries have been presented in Canada within the last eight years. Each of these writings indicate the value of considering either school-based management or similar innovations. In 1975, Atherton indicated the need to "...ensure that the amounts spent are done so with the maximum of effectiveness."(p. 170). He added that the accountability in the allocation of scarce resources was becoming more important(p. 176). Among his questions was

"What would be wrong in providing a larger proportion of the instructional budget for allocation at the school level?"(p. 178)

Interestingly, in that same year, the Jaffary Report(1975) recommended extensive decentralization in the Toronto schools. Rideout(1977), after an analysis of a number of problems, recommended a greater level of societal involvement in public education(p. 11). He favoured open boundaries and greater choice and diversity. During 1980, Kratzmann, Byrne, and Worth released their Report based on the study of the Calgary Public Schools. On the basis of diverse arguments such as the quality of work life in schools, they assert that decisions can be made by school staffs(p. 37) and recommend that

"...school systems allocate specific funds to each school within their jurisdictions..."(p. 49).

More recently, Lawton(1983), in a position paper, argues the need for local autonomy in education, while Bezeau(1983) offers the reminder that the circumstance of centralized revenue collection found in some provinces does not imply expenditure control which is also centralized. The two can coexist quite easily. Guthrie(1986) argues strongly that school-based management has much potential for the reform of education.

This commentary on the general significance of school-based management would suggest that school-based management could be the occasion for a major change in public education. Yet the empirical evidence about school-based management is sparse. Two authors have called for further investigation of the school-based management phenomenon. One of these is Caldwell(1977:550), who undertook an earlier study of school-based management before it was adopted extensively. He indicates the need to work on the instruments developed in his own study and to conduct research with a focus narrower than his. Among other ideas, he suggests that expenditures be compared before and after decentralization, comparisons be made across systems, that the efficiency of school-based management be examined, and that the budgeting process within schools be investigated. He notes the lack of information on decentralization in Canada and specifically recommends further study of the Edmonton Public Schools as examples. Lawton(1982), in his paper on the state of the art of educational finance in Canada, suggests that administrative innovations such as school-

based management are "open to further study"(p. 27).

Recent years have seen a number of districts adopt school-based management in Canada and the United States. Edmonton made a commitment in 1976; Langley, B.C. began decentralization in 1984; Cleveland, Ohio embarked on the plan in 1983. Other districts across the continent have adopted the idea to some degree. Developments in western Canada provided a special opportunity for inquiry into a "natural experiment" on decentralized management which may have considerable potential for far-reaching educational change.

Purposes of this Preliminary Study

This paper focuses on only selected parts of school-based management, notably, some of the questions which are believed to be of maximal interest. These questions relate to what happens when the idea is applied to school systems. What is the structure of school-based management? Does it achieve flexibility and accountability? And ultimately, does it make districts and schools more efficient?

II. THEORETICAL PERSPECTIVES AND RESEARCH QUESTIONS

This section provides an overview of some of the writings pertinent to school-based management. The literature was reviewed in a document entitled "Decentralization of Decisionmaking in Educational Finance: The Consideration of School-Based Management" which was compiled by the author in 1983. However, it is somewhat out-of-date. The purpose of this section is to review a few of the most salient sources on decentralization and determine the important issues raised by key writers.

There is something of a "great divide" in the literature on decentralization. Altschuler(1970:64) clarifies this bifurcation by saying that decentralization can appear in two rather different forms. One he labels "political," where units of an organization are relatively free from central control but required to meet the demands of some organized constituency. Private schools which are relatively independent are examples of political decentralization since they are beholden to private school boards and parents. Public school districts, as units, are also examples since their boards have a fair degree of independence from provincial or state departments of education and face an electorate. The other form of decentralization is what Altschuler labels "bureaucratic." This is just another word for "organizational" since an organization can be structured by its top level so that its lower level units possess some degree of autonomous decisionmaking. A most critical difference between the two forms of decentralization is that it would most likely require legislative action to recentralize a politically decentralized operation, but administrative action by the top level would be the only requirement to recentralize an organization which was

breaucratically decentralized. In simple terms, what the head office can give the head office can take away. This convenient conceptual division between political and bureaucratic decentralization permits most writings on decentralization to be grouped under one form or the other. Since political decentralization is somewhat less relevant to this study, it is discussed first.

Political Economy and Public Choice Views

Milton Friedman(1962,1980), a leading proponent of decentralization which is financially based, advocates the use of the competitive market model in the delivery of educational services. While the arguments in favour of a free market are extensive, they tend to be founded on a view of the individual person as the most appropriate locus of decisionmaking, particularly economic choice(Dyke, 1980). Collective or any other form of nonvoluntary control is seen as some degree of tyranny over the individual. Yet the problems of providing services via a free market are well documented and accepted. Wolf(1979) reviews the troubles of markets. But he asserts that nonmarkets, that is, any other way of delivering services, have an attendant and rather parallel set of defects. Examples include the existence of individual self-interest and organizational rewards which are not socially desirable and which may result in budget growth, misuse of technology, and misuse of information. Other defects are rising unit costs, unanticipated outcomes (positive and negative), and the redistribution of power in the society towards citizens who are organized into interest groups and away from those who are not. If his analysis is correct, problems of nonmarkets may be addressable with some of the features of markets.

A number of authors in education share the same line of thinking. Boyd(1982:113) defines public choice as the economic study of nonmarket decisionmaking or collective purpose. He indicates that that viewpoint assumes persons engage in rational choice and are motivated by self interest. Michaelson(1980), in the same vein, draws from the work of Niskanen(1971) on bureaucracies and Pincus(1974) on public school behaviour to postulate a theory of public choice and how it might be implemented. An author highly relevant to the current study is Guthrie(1986). His ideas appear in Garms, Guthrie, and Pierce(1978), which contains a widely-known proposal for the reorganization of schools called "school-site management."

Garms, et al(1978) offer some criticisms of centralized management, and propose a private school model for public education. For example, schools would have parent advisory committees, which would not simply advise but which would also hire and fire principals. Collective bargaining would be school-site based. Other personnel functions such as certification, employment, and assignment would be school-based. Clearly, the existence of the parental committee which would function in parallel with the district school board suggests Altschuler's "political" decentralization form. Yet to the knowledge of this author, no district in the United States or Canada has attempted

this kind of extensive decentralization. Let us now look at Altschuler's other form, "bureaucratic," in greater depth.

Organizational Views on Decentralization

This section reviews what organizational decentralization is, what reasons are offered for its adoption, and what more specific reasons are suggested for its adoption in educational organizations.

Dimensions and Kinds of Organizational Decentralization

Henry Mintzberg(1979,1983), a leading organizational theorist, grapples with the concepts of decentralization and administrative structure. His work was based on over two hundred writings and studies. According to Mintzberg(1983), there are two pairs of dimensions on which decentralization may be based. The first pair is vertical or horizontal(p. 99). Vertical decentralization refers to the extent decisionmaking power is shared down the hierarchy of management. It involves line persons from the chief executive to the lowest subordinate, and can be weighted on any role in the line of authority. Horizontal decentralization is somewhat different. It is the dispersal of power to non-line or staff members, who may be resident at any level in the organization. For example, if the locus of control in a school district was at the school level, the district would be vertically decentralized. But if the control was shared with the central office staff, the district would be decentralized horizontally.

The other pair of aspects which Mintzberg(1983:100) calls selective or parallel decentralization. By "selective" he means that only certain kinds of decisions are dispersed to the organization and others are retained. His examples include the possibility of retaining finance decisions at the strategic apex but moving production decisions to the first-line supervisors. He admits that

"Of course, such vertical decentralization must always be somewhat (*italics his*) selective. That is some decision-making power is always retained at the strategic apex."(p.102)

Complementarily, what he calls "parallel" decentralization is the dispersal of the power to make many (but not all kinds of) decisions in the same place. It seems fair to interpret "same place" as "same role." His examples include the dispersal of "finance, marketing, and production decisions" to the "division managers in the middle line."(p.100) Applying his concepts to school districts, selective decentralization could mean dispersal of decisions about supplies and equipment to schools but having the central office retain other decisions such as personnel. Parallel decentralization could mean that schools would have the power to make many categories of decisions. Their scope of planning and decisionmaking could encompass a much greater proportion of the resources they consume.

What are the alternative organizational structures which reflect the two dimensions of decentralization? Most relevant to the present discussion are the simple structure and the divisionalized form. These models are described briefly.

The simple structure has a number of notable attributes and the reader is referred to Mintzberg(1979 or 1983) for a complete account of it. Most noteworthy for this study is that decisionmaking power is concentrated largely at the organizational apex. Such a concentration can be permanent or temporary as shown by his example: "a school system in a state of crisis"(1979:305). Yet in normal times, school districts are vertically centralized since their central offices make most of the decisions on how most of the resources are deployed in schools. However, it should be noted that the simple structure most closely fits an organization in which one person makes most of the key decisions. In most school districts of all but the smallest size, the central office staff has power delegated to it, so districts are horizontally decentralized.

The other important organizational type identified by Mintzberg is the divisionalized form, which involves the delegation of most of the decisionmaking power to lower level units via vertical and parallel decentralization(1983:103). Units are given extensive latitude and are often geographically distinct. Mintzberg even calls them quasi-autonomous. But divisionalization is a rather limited form of decentralization. He asks

"But does divisionalization constitute decentralization? Not at all; it constitutes the vesting of considerable decision-making power in the hands of a few people -- the market unit managers in the middle line, usually at the top of it -- nothing more."(p.104)

Mintzberg then expresses his concern about divisionalization of a public organization(1983:104). Because his view of parallel decentralization is one regulated by performance control systems(p.104), it would appear easy to attempt regulation by using a great many detailed and potentially destructive measures. Hence, he advises against divisionalization of public service agencies.

Reasons for Organizational Decentralization

Herbert Simon(1957:236), in his classic on administration, addresses the topic of decentralization and offers three main organizational reasons for considering it. One is that higher decisions are more costly to make because higher administrators are paid more. This thought is quite compelling if the value of the time of senior district executives is considered. If they do not delegate decisions, not only will they be overloaded, but the decisions will be much more costly to make.

Another of Simon's reasons for decentralization is the

difficulty of presenting information to the higher administrators. It simply costs time and money to transmit and receive information, particularly, when the persons are not proximate. Simon seems to be assuming here that the subordinate has the necessary information to make the decision and really just needs to convince the superordinate of his or her choice. That raises the general issue of "who knows best" about what kinds of decisions.

A further reason Simon gives for decentralization is that

"centralization leaves idle and unused the powerful coordinative capacity of the human nervous system, and substitutes for it an interpersonal coordinative mechanism."(p.240)

Here, the assumption is made that the locus of decisionmaking can be made resident in an individual person. This view suggests that the individual is capable and competent, and that group activity may be less so, a theme well expressed by the political economists. Simon provides examples of individual coordination, such as threading a needle or playing a piano. Yet he does not acknowledge the possible benefits from moving the locus of decisionmaking from a head office to a smaller unit of the same organization.

Henry Mintzberg(1979,1983) also has addressed the reasons for decentralization in his treatment of organizational structures. In a chapter entitled "Untangling Decentralization," Mintzberg(1983) asks the simple question, "Why decentralize?" Three answers are provided.

"The top managers,..., see errors committed below and believe they can do better, either because they believe themselves smarter or because they think they can more easily coordinate decisions. Unfortunately, in complex situations, this inevitably leads to a state known as 'information overload'... People at the bottom of the hierarchy with the necessary knowledge end up having to defer to managers at the top who are out of touch with the reality of the situation."(p.96)

This first reason for decentralization is what might be called the "informational defense." Persons in a lower unit are seen to have the needed information to make a decision which affects their unit (and perhaps others). They are deemed competent and trustworthy. The higher administrator is seen not to have the information relevant to making the lower level decision. Benson(1978) makes extensive use of this argument in his discussion of decentralization from state departments of education to school districts. He indicates that local conditions vary sufficiently to make some degree of locally autonomous decisionmaking necessary.

Mintzberg's second justification is

"...that it allows the organization to respond quickly to local conditions."(p. 97)

This statement suggests that decisions, to be adequate, are required to be made within a reasonable time. Such an idea may be called the "flexibility defense," since the ability to adapt to nonstandard conditions quickly enough is a way to solve problems and grasp opportunities.

Mintzberg's third reason is

"...that it[decentralization] is a stimulus for motivation."(p.91).

He also suggests that the objectives of managerial policy include the attraction and retention of creative and intelligent people. This third argument for decentralization may be called the "creativity defense" because it supposes that the motivation mentioned is the incentive to solve problems with creativity and pursue opportunities with invention. Human potential is assumed to be unleashed once decisionmaking power is given. This idea is closely parallel to Simon's view of coordinative potential and to the political economists' concept that ingenuity resides in the individual person and not with higher authority.

Reasons for Decentralization in Educational Organizations

Two major themes relevant to decentralization pervade the educational literature. One is a focus on accountability, the other on efficiency. Another theme associated with each of these is innovation and renewal.

Accountability

Cohen(1983) provides an overview of research on effective schools with reference to school level instructional management and coordination. According to the studies he surveys, a primary factor in effectiveness is the tightly-coupled nature of the program, whereby goals are agreed upon. A secondary factor is the leadership of the principal, whereby goals are made clear and are central to the school's mission(Cohen, 1983:29). Goodlad(1984), in his extensive study of 38 schools and 1000 classrooms, tends to agree that schools can be viewed as a critical unit for improvement(p.31). He observes that the more effective schools are increasingly creative with regard to alternative programs of instruction(Goodlad, 1984:276). He says that

"...the principle of 'every tub on its own bottom,' or nearly on its own bottom would go a long way toward developing schools that took care of their own business, rectified chronic problems, and communicated effectively with parents -- characteristics of the more satisfying schools in our sample."(p 276).

He recommends

"...a genuine decentralization of authority and responsibility to the local school within a framework designed to assure school-to-school equity and a measure of accountability."(p.275).

Yet, Goodlad's focus on the school may not be the most appropriate. Vaughn(1983) criticizes the view that schools are the primary educational units for prospective innovation. He says that effective schools research assumes that

"...the staff in each school is ready and able to work toward these [desired] conditions."

It also

"...ignores the need for district contributions of curricular or staff development expertise and access to supplemental financial support."(p.13).

Just as important as Vaughn's criticisms is his model of change, which puts the classroom at one end of the "influence beam" and the district at the other end(p.14). His key is

"...in understanding the contribution that all three influence centres can make toward a common goal."(p.14).

Mintzberg(1983:91) mentions that one of the objectives of decentralization is to provide an opportunity for innovation among the lower levels of an organization. Since the key to innovation may lie in the level of motivation personnel have for their work and the extent they can be involved in planning and decisionmaking which affects their work, their involvement may be an important indicator of potential organizational renewal.

Efficiency

Thomas(1980) provides the popular definition of efficiency as

"...making the best use of scarce resources to achieve given ends."(p.148).

He says that one of three outcomes happen: an increase in goal attainment at the same level of costs; maintenance of goal attainment at reduced costs; or an increase in goal attainment at reduced costs. He notes that efficiency is an important societal value and also that it may not conflict wholly with the need for student equity:

"Equity depends on efficiency, since it rests to some degree on the development of efficient methods for educating low achievement students."(p.164).

Schultz(1982:38) agrees strongly with Thomas, saying simply

"The complementarity between efficiency and equity in

elementary and secondary schooling is being overlooked in the quest for equity. An optimum level of efficiency in our big school systems would in all probability contribute more to the cause of equity than any of the many school reforms now being imposed on our schools."

The apparent complementarity of equity and efficiency is a critical conceptual and empirical issue. Clearly, the goals of decentralization seldom include student equity, though a greater level of fairness or opportunity could result. But if that leaves efficiency a prime concern, is it not possible that efficiency could be achieved too well?

Callahan(1962), in his book entitled "Education and the Cult of Efficiency," provides a valued source for anyone with an interest in the concept. His approach is an historical one which suggests that the pursuit of efficiency in education may be akin to embracing the scientific management theory of Frederick Taylor, whose ideas were popular during 1910-20. According to Callahan, the efficiency of the first quarter of this century was the response of school administrators to demands for efficiency from outside education. It seems that business

"...successes were in the main based upon advances in technology, in the educational literature at least, credit was given to businessmen and to 'modern business methods'."(p.148).

Businesspeople apparently introduced and applied principles of scientific management(p.54) via the production of records and reports(p. 153). The imposition on education meant that

"...our teachers were forced to spend countless hours on meaningless clerical work..."(p.178).

Callahan's view of efficiency as expressed above would suggest that if schools adopt the efficiency aim again, then administrative processes for accountability could degenerate into having to answer for the minutes devoted to teaching and learning. Mintzberg(1983) would tend to agree with this view, since he provides examples of other public service institutions which pursue small objectives in place of concern for general goals. One example given is the requirement that police constables give out a quota of traffic tickets rather than enforce the law(Mintzberg, 1983:104).

However, a closer look at Callahan may provide some additional insights. Efficiency is never defined in his book. He admits the

"...advisability of applying certain business practices where they are appropriate to the work of the schools. But they are a means to an end -- the end being to provide the best possible education for our children."(p.177).

So it would seem that some business methods may be reasonable to adopt, even if a preoccupation with efficiency is not. He acknowledges that

"A concern about the wise expenditure of funds and the avoidance of waste is as desirable in education as it is in business. But a 'wise' expenditure of funds depends on the outcomes which are expected, or, in business terms, the quality of product desired." (italics new)(p.178).

Here Callahan is telling us that the educators of those earlier years did not focus adequately on the outcomes of education, but were preoccupied with the inputs. He specifies his view completely when he says

"It is clear that what administrators sought after 1911 was not efficiency but economy plus the appearance of efficiency." (original italics, p.178).

Thus, the aim was cost reduction. What Callahan seems to be saying is that his book is not about efficiency at all. Rather, it is a volume on a severe form of cost accounting, which most persons would say is misplaced in education. It may be that the popular use of the term "efficiency" among educators has been so closely associated with cost accounting because his book, which was not about efficiency, retains that word in its title. However, the above discussion suggests that there may be some danger in proceeding to decentralize in a public agency, such as a school district, since accountability and efficiency may not be realized.

Research Questions

A focus for this study is provided by the following four research questions generated from the preceding discussion.

1. The literature is divided into two main ways in which decentralization is conceived -- politically (where local school autonomy is very high) and organizationally (where schools are given more freedom but the license exists at the pleasure of the district board). As practiced, school-based management could have either form. What is the structure of school-based management?

2. One of the justifications for decentralization in organizations is that because unit-level personnel are more informed about unit-level needs, if they are given the authority to respond to those needs within a reasonable time, they will plan and make decisions accordingly. Does school-based management result in flexibility of decisionmaking?

3. Writers on organization and education have a concern for the need of central offices to know if tasks carried out under centralization are, in fact, accomplished. Does school-based management provide a form of educational accountability?

4. A key test for any change in educational administration is if it alters educational outcomes, specifically relative to educational costs. While administrative processes may be varied, a most critical question becomes: Does school-based management contribute to school efficiency?

III. RESEARCH METHODS

The general methods with which this study was undertaken are outlined in Guba and Lincoln(1981:63-81). A prime source of information was a set of semi-structured interviews developed from a review of the literature(Brown, 1983). Apart from the interviews, three other sources are important to this study. One is the principal investigator's notes taken during a conference on school-based management which was held by the Edmonton Public Schools in 1986. A second source was documents provided by the districts and a third was the research undertaken by others on school-based management in Edmonton.

Sample Districts

Two school districts were selected as bases from which to gather evidence about school-based management. The first is the Edmonton Public Schools, referred to as Edmonton, which undertook school-based management in a pilot program in 1976 and for all schools in 1980. The second is School District No. 35 (Langley), referred to as Langley, where school-based management was tried for 1984-85 and then implemented district-wide in 1985-86.

Edmonton, located in Alberta, is a district of 70,000 students and 3,900 teachers(Edmonton, 1986-87). It comprises 200 schools and has a budget of \$307,337,000 which is funded 53% by the Province, 10% by a provincial levy on local properties, and 37% by local taxes. The cost per pupil was \$4,391 in Canadian dollars for 1985-86. Edmonton is a city with no suburbs, and hence has a wide range of socioeconomic conditions within its borders.

Langley, near Vancouver in British Columbia, is a school district of 14,700 students and 748 teachers(Province of B.C., 1986-87). It comprises 40 schools and has a budget of \$47,142,000 which is funded 77% by the Province, 21% from local residential taxes, and 2% from other sources. The district's cost per pupil was \$3,409 for 1985-86 (Canadian dollars). Langley is suburban but is also a mix of town and rural educational settings. Like Edmonton, it is socioeconomically heterogeneous.

Interviews

Permission to conduct interviews and gather data from the two districts was requested initially of the superintendents by letter. After written clearance was received from Mike

Strembitsky of Edmonton and Emery Dosedall of Langley, most persons to be interviewed were chosen in conjunction with the superintendent or his designate. This courtesy was permitted the districts when feasible because administrative subject matter such as school-based management can include potentially sensitive topics. In neither district did interviewers feel restrained in the selection of persons from whom to gather information. When permission was virtually infeasible or inappropriate, as in the case of a former Edmonton employee, it was not requested. The total number of interviewees in Edmonton was fifteen, including most ranks: superintendents, central office personnel, principals, teachers, and an Alberta Teachers' Association employee. In Langley, eighteen persons similar in rank as above were interviewed. The number of interviewers was three; one for Edmonton and two for Langley. Interviews were conducted during the period from January, 1983 to June, 1985.

A general interview schedule was prepared and adapted to the circumstances of each individual interviewee (see appendix). The objectives and conditions of the interview were explained to the subjects at the start of the interviews. Confidentiality and anonymity were assured. Time taken was approximately one hour but longer in some cases. Notes were written and the order of the questions was varied as different topics were raised by the subject and points of clarification were covered by both parties. In the opinion of the interviewers, virtually all subjects were highly cooperative and straightforward in their responses to questions, some of which required reflective answers. Points of criticism of school-based management appeared to be freely offered, giving interviewers the impression that most subjects participated capably, willingly, and with no desire to withhold relevant information. For most of the subjects, a copy of the interviewer's notes was returned for ratification and clarification. Subjects appeared to respond well to this opportunity to correct any factual errors or misinterpretations.

Analysis of Data

The method of data collection and analysis was similar to that outlined by Miles and Huberman(1984:21-23) but with some important differences. Most notable of these was that the small number of interviews did not require the extensive tabulation of the results because the data were limited in kind and quantity. Analysis could be less elaborate than Miles and Huberman's specifications. Another simplifying feature was that interview subjects were usually administrators and the interviewers were themselves students of administration. This meant that the concepts used by interviewers could be more abstract (such as "flexibility"). The result was that many respondents could provide useful avenues of interpretation of the facts as they found them. A third variation from Miles and Huberman was the mix of data sources used. By harnessing a variety of kinds of data, interview generalizations could be tested, at least tentatively, with interpretations from the available documents, presentation notes, and closely-related research.

Apart from the above variations, data analysis was carried out according to Miles and Huberman's steps of data reduction, data display, and conclusion drawing/verification. Data reduction proceeded by having the junior interviewers compile and interpret their results under the supervision of the principal investigator. In turn, the principal investigator compiled data from all sources (his own interviews, junior interview reports, presentation notes, documents and other research findings). The data were displayed by initial groups which reflected main topics. These themes were then checked with those in the literature and the review of the literature was updated and realigned with them. Data were regrouped into the four main themes of structure, flexibility, accountability, and efficiency, as reflected in the research questions. During the conclusion drawing/verification phase, data on each theme were examined for validity and stability. Conclusions were specified and interpretations made on the basis of the interpreted strength of the themes in the data. keypunch has lower case

IV. RESULTS

The analysis and synthesis of the research data are presented under each of the four research questions posited in the short literature review. The first key question emerged from a discussion on the forms and variations which school-based management might take:

1. What is the Structure of School-Based Management?

This query is easy to answer at its most general level. When the political model from Garms, Guthrie, and Pierce(1978) is reviewed, it is found to contain elements such as school-site collective bargaining and school-site parent committees which have responsibility for directing school policy and hiring or firing the principal. These critical (perhaps even drastic) features are absent in school-based management as encountered in Edmonton and Langley. Clearly, their decentralization is based upon the willingness of their central administrations to permit schools to make many critical decisions. As such, the structure is bureaucratic in Altschuler's(1970) terms and NOT political, whereby community groups are given control of policy.

A corollary to the basic structural question is the extent to which decentralization has taken place in the two districts. One simple indicator is the percentage of the operating budget which is allocated on a lump-sum basis to schools. According to Edmonton(1986-87), the figure is 75% and from interviews in Langley, 85%. These sizeable percentages indicate that personnel are included in the allocations. This is a critical point, because principals across North America have always had some measure of school-based management in the form of allocations and

budgets for school supplies. Sometimes, money for equipment is also allocated to schools. And under such conditions, it is easy to claim that any district "has school-based management." However, Edmonton and Langley have included not only personnel and maintenance, but are undertaking experiments with the further decentralization of utilities and central office services.

District Definitions of School-Based Management

A second answer to the structural question may be provided by the way in which the districts define school-based management. Edmonton(1986:42) makes a general statement.

"School centred administration is a process in which school based decisions and actions aimed at achieving specified results at the schools are made by the staff in the schools."

It should be noted that the reference to "staff" normally applies to "faculty and staff." This definition appears to fit well with Mintzberg's(1983) concept of the divisionalized form, in which the managers of significantly-sized units, called divisions in the corporate world, are given prime planning/decisionmaking authority and responsibility. The assumption behind this definition is that the persons with the prime responsibility for the welfare of students are parents, school board members, and school personnel (Strembitsky:1986). A less frequently mentioned assumption is that school personnel have the competence and can be trusted to manage money and set local educational priorities(Strembitsky interview).

Langley's definition for school-based management is straightforward:

"Decentralized decision-making is an educational process which is designed to allow the most significant decisions and actions aimed at achieving specified results at the schools, to be made at the school... The essence of decentralization is that there is a marked shift of decision-making responsibility from central office to the individual school."(Langley, 1984:1).

Again, focus on the school level is very clear. While the scope of decisions is not specified, there is no question that school-level matters are to be addressed by the school.

District Goals for School-Based Management

A third view of the structure of school-based management is provided by the stated goals which Langley and Edmonton have for decentralization. Such goals provide some idea of why the structure might be adopted. They appear to be based on at least two important principles. One is that the "dollar follows the child"(Strembitsky:1985). Another is that the district attempts to be "fair and equitable versus fair and equal"(senior administrator). Such principles raise the equity and efficiency

issues discussed in the literature review. They represent Edmonton's way of addressing both key values.

Langley's(1984) goals for district decentralization per se are explicitly put forward:

1. To provide principals and teachers with an appropriate and effective role in the decision-making process in education.
2. To provide a decisionmaking mechanism which is responsive to the needs of students.
3. To develop a valid system of accountability.
4. To ensure the effectiveness of the expenditure of the educational dollar.
5. To give the budget/planning process a direct educational focus."(Langley, 1984:1).

The first aim emphasizes the role of principals and teachers, an idea which might be inferred from the foregoing statement that "decisions and actions...be made at the school." As for the second aim, a key word is "responsive," and one which is not closely associated with organizational decentralization, but quite strongly with political decentralization, particularly since it is Garms, et al. (1978) who stress that that control should be placed in the hands of the parents. In this context, the intention appears to be to give schools the power to be responsive to student needs, perhaps not as perceived by parents, but rather, by school staffs. The next item emphasizes accountability. Again, this is a cornerstone of organizational decentralization (Mintzberg, 1983). The fourth aim is to achieve effectiveness of dollars expended, and this seems to be close to the concept of efficiency as used by Thomas(1980). The fifth goal affirms the idea that planning (and priorities) are to be attached educational aims, along with resources, a concern of Goodlad(1984).

There is no comparable set of goals for school-based management which could be found for Edmonton. Instead, the general goals of the the district(Edmonton, 1986:47-49), which are not reproduced here, have the aims of decentralization built into them. However, Edmonton(1986:50) provides statements of "principles of organization" which do reflect aspects of organizational structure. Three of these address matters of decentralization specifically. One is:

"Each individual shall have only one supervisor."

As it stands, this statement seems very self-evident for large or complex organizations. However, Strembitsky(1986) tells the story about asking a group of administrators how many bosses each of them had. One responded that he had ten. When the response was checked with the ten persons who were named by the one individual, seven said that they were. A second principle is:

"No one shall have authority to direct or veto any decision or action where that person is not accountable for the results."

This idea also appears to affirm the "one-person-one-boss" rule. A third is:

"The organization should avoid uniform rules, practices, policies and regulations which are designed to protect the organization against 'mistakes.'"

Here, the intention seems to be to avoid the uniformity of standard practices which may have originated because of failures, each of a single instance. If considerable freedom is to be given to personnel in schools, then this principle appears consistent with the idea that "it takes off their chains." (senior administrator). Another affirmation of the same idea appears in the role and responsibility statements for the role of principal (Edmonton, 1986:57):

"The planning and control of the expenditure of all funds."

This statement assumes that sufficient numbers of dollars, particularly discretionary ones, are available to schools. But how does school-based management provide resources to schools?

Method of Allocation

The two districts have allocation systems in place which determine the total dollars to be given to each school. Since these systems are applied across many schools, they are based on formulae which, in general, are intended to ensure that the same number of dollars go to each comparable student. In fact, the large proportion of dollars is based on simple formulae of school enrollments times the allocation per student. Edmonton allocates 90% of resources to ordinary students in this way (senior administrator), while the figure for Langley is 70% (senior administrator). The difference in the two percentages may be explained by the way in which the formulae are set up.

A number of interviewees in Edmonton pointed out the existence of "small school problem," now corrected, which came about because the above allocation was linear. Allocations to small schools were strictly proportional to those to large schools with the result that small schools had little discretionary income. A second criticism of the allocation process was that the total amount of money available (which drives the allocations per student) is determined in advance by the school board, whereas the educational priorities are set by schools much later. Calling this process "supply side education," Sommerville (1985) argues that the educational priorities should be determined before the resources are specified.

A major point to be made about the allocation system is that it provides each school with a lump-sum dollar figure. The formulae do NOT determine HOW the schools are to spend their money. A Langley principal expressed the idea quite bluntly:

"The allocation is just that, an allocation and not a

prescription for expenditures."

Some principals indicated they would not want to return to "squeaky-wheel budgeting," where school allocations were affected by principals lobbying with central office staff.

Once schools receive the lump-sum figure in March and its update in October (as a result of enrollment counts on September 30) they know the limits of their resources. But the planning process within the schools continues most of the year, according to principals. Budgets are also subject to board approval. While the following sections of this report focus on that process more extensively, a critical facet is the way in which teachers' services are acquired in both districts. All teachers are purchased at the district average teacher salary rate, currently about \$36,000 per year in Canadian funds. It is not clear why this method of payment for teachers was chosen, since it overlooks the differential abilities of junior and senior teachers. Economic rationality would suggest that at least some gross distinctions be made among teachers. However, a considerable proportion of teachers are at or near the maximum on their salary scales, so variation from the average is far less than in previous years (Stembitsky, 1986). Another consideration is that salary discrimination among teachers when school-based management was being implemented could have produced unwanted conflicts between principals and teachers.

Summary

Briefly, the question on the structure of school-based management can be answered as follows: It was found to be a structure of the organizational type and district aims and principles appear to fit the kind of decentralization called the divisional form. Decentralization has proceeded vertically down the hierarchy to schools. They have control over personnel, equipment, maintenance, and supplies, but most have little say in utilities or central office services at this time. Allocation systems are intended to ensure that those who have direct responsibility for each child have control over the learning resources for that child.

2. Does School-Based Management Result in Flexibility of Decisionmaking?

The desire for flexibility in making decisions at the school site is reflected in this administrator's comment:

"[we] should not have to circumvent the system doing 'wrong' in order to do right."

The intention of the districts to increase flexibility is reflected in a statement by a senior administrator whose view of centralized management was that it was

"easier to get forgiveness than permission."

Now, under decentralized management, he asserted that it is
 "easier to get permission than forgiveness."

A second look at these remarks show that they speak to accountability as well as flexibility. One principal put the idea of flexibility quite simply:

"The heart of the matter is the ability to respond to the unique needs of the school."

These general views on flexibility are supported by large numbers of school-level personnel in Edmonton. Alexandruk(1985) sampled 32 principals (an 84.2% return rate) and 475 teachers (a return rate of 46.4%). One of his questions asked to what extent flexibility had been achieved. The total sample responded by saying it had been attained in schools at the 50% level(Alexandruk, 1985:48). When asked what were the strengths of school-based management, respondents mentioned items which were then classified by Alexandruk(1985:109). Flexibility was reported as the leading strength by principals and teachers. It would appear that school personnel believe that their roles accord them a fair measure of flexibility of decisionmaking on matters which are important to them. An example of flexibility given schools was offered by a senior administrator who said that district service was

"...provided upon request so that help is available if and when needed and so that 'help' is not given when it is not needed."

Some Examples of Flexibility

Are there some specific examples which respondents reported as indicative of their flexibility in decisionmaking? Among the most immediately mentioned items were those pertaining to equipment and supplies. One school purchased an internal telephone system, some computers and a bus(principal). A person without the relevant information might find it difficult to understand why funds would be spent on telephones or buses. Stembitsky(1986) gave the example of schools who require extra audio visual equipment because they are in two-storey buildings. In both these cases, centralized management in Edmonton had not accommodated these needs. The staff of a large secondary school in Langley reduced copier use and instead hired an aide. An administrator mentioned:

This could not be allowed under centralization...we would have to put an aide in every school."

Many interviewees stressed the idea that their actions would not have been permitted under centralized management.

Are there examples concerning flexibility of personnel decisions? An example provided by Strembitsky(1986) was the previous allocation for \$100,000 for professional development for

those in Edmonton's schools. When the requests for professional development from schools were aggregated, the figure was \$400,000. There are other school-level examples. An elementary principal said he was able to match an experienced mathematics teacher with one who needed help. An English department was faced with the choice of \$30,000 worth of new materials or an additional teacher. Department members then asked "What kind of teacher?" (Stembitsky, 1986). One secondary principal mentioned that he could "sell" teachers to other schools.

The range of flexibility may be widening further. Some schools in the two districts pay for their own utilities. Edmonton undertook a special experiment during 1986-87. For 15 schools and one curriculum department, schools were allocated the monies for those subject matter consultant services, to be spent as they wished. The privilege of not purchasing those services, or of finding them outside the district, was accorded.

While the limits of school flexibility are not particularly evident, at least one problem was foreseen by a principal who raised a key implementation issue:

"...the push for more rational expenditures will cause hard questions to be both asked and answered...there is a real possibility that we will have to face the fact that some work (non-professional) in the system is being done by teachers... Pressure will come from the teachers themselves and teacher organizations will have to adjust where they are unable to justify... In the short term a staff may be faced with making decisions that are 'anti-policy' of teacher organizations...these decisions must be faced...they won't go away."

Summary

The evidence, on a case-by-case basis, seems to indicate that school personnel are able to make and carry out decisions which may not have been possible under more centralized management. Schools appear to be taking control of planning and decisionmaking concerning their personnel, equipment, maintenance, and supplies. The presence of uniform rules for school resources may be contrary to the idea of school-level control.

3. Does School-based Management Provide a Form of Educational Accountability?

As a cornerstone of school-based management, accountability was one of the most frequently-mentioned subjects among respondents. The starting point of discussions was often centralized management. One administrator likened its process to

"Giv[ing] a child a week's allowance on Thursday and saying that if it was not spent by Saturday it would be returned."

Under school-based management, another respondent expressed the simple idea that

"...the budget system provide[s] for valid accountability..."

Alexandruk's(1985:48) results support this view. He found that his respondents believed that the schools had achieved an accountability system at a level between 50 and 75%. But how does the accountability process work? A senior administrator indicates that

"...District and all school budgets are open to the inspection of the schools and the inspection of the public before the school year begins." (original italics)

One secondary principal reported that the budgeting process is a year-long one with peak times in January for setting priorities, March for the delivery of a "pretend" budget which reflects resources approximately, and a "crunch" budget in September when specific allocations are known. During the budgeting process a board subcommittee in Edmonton meets with a few schools at a time to discuss budgets being planned(board member). Another principal noted that status reports are sent monthly to each school from the budget office and that school budgets are open to public scrutiny.

Accountability in Roles

There is a certain paradox in the way in which schools have more decisionmaking authority yet are more accountable to the school board. To some extent, decentralization has produced a greater centralization if the board is more in control(Strembitsky interview). He believes the board now moves "directionally as opposed to exactly." This idea is reflected in a comment from a board member in Langley:

"The Board's concern is not with schools doing things right but with schools doing the right things."

An Edmonton board member stated simply that the Board was

"no longer making 'rules for schools.'"

Another Edmonton trustee delineated the Board's role as concerned with setting policy, negotiations, overall budget, allocation, district priorities, monitoring, interfacing with senior governments, and general communications. In short, the focus appears to be on policymaking rather than on providing exact solutions for specific school problems.

Have central office roles changed? Activities of consultants, supervisors, and coordinators appear to be untouched by the move to decentralize. However, with reference to the Edmonton experiment to put a small segment of consultant services on a user pay basis, one consultant observed that some colleagues

were required to become less specialized. More dramatically, the "one-person-one-boss rule" for line administrators appears to be in place. This means that in Edmonton, associate superintendents supervise principals with a span of control of about 32 schools which are geographically proximate (Edmonton, 1985-86). Principals are visited by their respective associate superintendents. One defined the role as that of a "coach," but also admitted that a few decisions could be made by "administrative fiat." That associate's view was to address problems as they arise, a management-by-exception approach.

The greatest impact of accountability may be found on the school and the role of the principal. According to Alexandruk (1985:48), the principal's role in planning and decisionmaking has been achieved to the level of 75% of attainment. When principals were asked, they indicated that school-based management had achieved its objectives at the 75% level, a greater extent than that perceived by the teachers. For reasons which Alexandruk does not explain, elementary schools perceived higher levels of attainment of aims of school-based management than did secondary schools (p.73).

One reaction to the impact on the role of the principalship was:

"...[I] basically agree with (but it scares me) the amount of authority and responsibility of the principal." (senior administrator)

A similar reaction is registered by teachers in the Alexandruk (1985:49) study. When asked to nominate weaknesses of school-based management, the increased authority of the principal was ranked fourth (following time, resource allocation and stress; p. 112).

How are principals accommodating this role redefinition? An associate superintendent mentioned that most had been vice principals under school-based management and thus had experience with the planning process. The same person said that no principal had ever been removed for mal-budgeting. Evidence from Langley indicates that principals feel they work harder, despite the help of office automation. One senior administrator and one principal in Edmonton stressed the need and use of management information systems for schools. The new office technology may be an important facet of school-based management, since it enables the manipulation and transfer of data much more efficiently than manual methods.

When one principal was asked if he felt that the budgeting process required him to be more of a technician, he replied that he felt more of an educational leader because he could influence school priorities and resource deployment. Yet other principals may not agree. One raised the possibility that some colleagues may be more comfortable with numbers and paperwork than they are with curricular or personnel issues. As a consequence, school-based management may have provided an opportunity to spend much

more time on the technical aspects of their role.

Participation in Planning and Decisionmaking

What is the level of staff participation under school-based management? The principals may provide the answer to this question. According to the Langley(1984:7) handbook on decentralization, the extent of staff involvement is dependent on the principals' wishes. One stated flatly

"In Langley, principals do not allow involvement where they have already made up their minds."

Yet, another responded with reference to a school budget committee that

"Members of the committee elected by staff were perceived to be fair and impartial, able to rise above departmental loyalties, and concerns, and represent the whole staff with judgement and discretion."

Do teachers agree? When Alexandruk(1985:109) asked his sample of teachers for the strengths of school-based management, staff involvement in decisionmaking was ranked second. When asked on a scale from 1 (highly agree) to 6 (highly disagree), teachers scored 3.27 and principals 1.68 on the issue of satisfaction with school budgeting(Alexandruk, 1985:78). Principals clearly favour school-based management more than teachers. Fully 65.8% of his respondents registered some level of satisfaction. This is quite a strong majority vote in favour of an administrative change.

The surveys by Edmonton showed that the level of satisfaction which teachers had with their involvement in the budget planning process ranged from 24% to 100% for the schools(Strembitsky, 1986). In Edmonton, one secondary principal said that the department heads shared in making personnel decisions. An Edmonton teacher noted that her elementary school was divided into grade groups which functioned as planning/budgeting units. As for support staff, one person reported that the group had a high sense of participation and were consulted on office problems(Edmonton Experience II, 1986).

As indicated by the figures above, not all persons are entirely happy with their level of participation. Would teachers return to centralized control? Even when under retrenchment conditions experienced during the period 1983 to 1986, one teacher in Langley preferred "self control to central control." However, others associated the implementation of school-based management with the beginning of retrenchment. They perceived the former as a tool of the latter. A person from the Edmonton Teachers' Association raised two additional concerns of teachers: some may not care about the budgeting process; others may resent the time which they are asked to give to it. Results from Langley indicate that teachers spend a considerable time planning.

Some additional insights into teacher participation and principal decisionmaking are provided by Young(1984). She chose

four schools in Edmonton randomly and then gleaned information from the principals and two teachers in each school. Her methods included interviews, observations and the examination of budget documents. While she notes that no single method of budget planning was recommended by the central office, the four principals chose a consultative rather than a collegial form of decisionmaking in their schools. Young(1984:30-31) offers four reasons why the consultative model dominated in her sample schools. First was the perception that the principal could solve problems because they were not open-ended. Second, teachers were seen to have little stake in decisions made. Third, traditional roles under centralized management were accepted, and fourth, the principals and teachers derived different kinds of satisfactions from their work. In the instances of these four schools, teachers appeared to have input into the planning process but the principals were clearly in charge, an outcome which Mintzberg(1983:104) predicted for divisionalization. He stated that when there were not structural reasons for decentralization beyond the divisional head, there was no reason to believe that such heads would share the power which was given to them by the central office.

Accountability and Outcomes

Accountability is also addressed outside the budgeting process, to which most of the above remarks and evidence have been directed. Since 1979, Edmonton has distributed questionnaires to random samples of parents, students, and staff(Palmer and Mosychuk, 1985). For 1985, student responses numbered 16,139 (91% return rate); parents 15,840 (92%); administrators, teachers, and staff returned 6,193 (94%). Questions were tailored to each employee group and school level. A question picked at random from Palmer and Mosychuk(1985:57) gives an indication of the kind of information gathered: "16. Do you feel that your school/unit is a good place to work?" This one was administered to all staff. Another randomly selected one is: "20. Do you feel that the number of pupils in the classes that you teach is also appropriate?" This is a school staff question. Responses are "very much," "fairly much," "not very," or "virtually none," with a category for nonresponses included. Although tallies for each category are reported, the level of satisfaction for each item is measured by the percentage of "very much" plus "fairly much" divided by the total, exclusive of nonresponses.

The District collects and compiles the results and then shares those responses pertinent to each particular school with that school. Although termed "white knuckle time" by one principal, interviewees agreed that results were generally useful. In fact, one alleged that on receipt of their school's results, principals immediately telephone each other to "compare report cards." Schools are also given district-wide averages and standard deviations of each item, and thus can determine their satisfaction performance relative to the whole. Such feedback from students, parents, teachers, and others provides one basis for school performance and administrator evaluation. However, one principal found the results to be too general to be immediately

useful. Using the examples from the paragraph above, knowing that only 30% of school staff found the school a good place to work does not indicate why a problem exists, only that it exists. Likewise, 60% of a staff may feel that class sizes are too large, but the reasons for that view are not given. Overall, interviewees were satisfied with the use of the survey. Even the principal who mentioned "white knuckle time" felt a lack of feedback one year when the survey was not administered (1984).

The yearly use of the survey provides a large amount of information on one aspect of productivity -- the satisfaction which subordinates and clients have with the quality and quantity of educational service received. The survey does not appear to be connected to the kind of goal displacement predicted by Mintzberg(1983) if a public agency was to divisionalize. His suggestion would have produced the pursuit of trivialized educational outcomes such as very specific test scores. Nor does the survey seem to be a manifestation of a rigid cost-accounting practices feared by Callahan(1962) when emphasis on "efficiency" is paramount. Results for each survey item appear interpretable a number of ways, partly because respondents no doubt defined their satisfactions in assorted ways. As long as the results themselves are not applied as a singular method of school and administrator assessment, they may continue to be accepted and applied.

Summary

In summary, respondents believed that a fair degree of accountability had been achieved. Boards may feel schools are more accountable and be more concerned with policy. Lines of authority and responsibility are clear because the "one-boss rule" is in effect. The principal's role is seen to be more powerful, but the potential problems of overwork and the demands of the technical features of the role remain. The evidence presented on participation indicates that staff involvement seems contingent on principal discretion and may be limited to consultation. Parent-student-staff surveys provide indicators of performance for the district, schools, and activities within schools.

4. Does School-Based Management Contribute to School Efficiency?

The assumption has been made that the prime test of an administrative change is its ability to make an organization more efficient. This idea implies that evidence on outputs and inputs could be assembled and the connection between them addressed. In an interview, Strembitsky said that school-based management was to be justified on the basis of its results at both the school and district levels. Since processes also affect efficiency, information was gathered on some of them as well.

Process Changes

Are there some indicators of increased efficiency? One Langley principal stated in general terms that

"There was an initial push for items that the staff was starved for...this District with a 'back-to-the-basics' history is starved for items from capital disproportionate[ly] to other districts."

Another principal gave a particular example of how he had worked out a special arrangement with a part-time secretary. The agreement was to have the secretary work full-time during school opening, reporting, closing, and other peak periods in exchange for time off during non-peak periods, a more suitable use of secretarial time. Prior attempts to institute this arrangement had failed under centralized administration.

Respondents indicated that school-based goal setting and inservice education were examples of actions taken to improve school results. One mentioned that he could "funnel money into 'Pro-D' and 'inservice' as needed," or buy expert help. Another felt that decentralization had a general catalytic effect and infused new ideas into the school.

A more extensive example was provided by an Edmonton principal who took advantage of a \$30,000 surplus from the previous year. Her operating budget was approximately \$750,000 that year, so the surplus represented about 4% above the allocation. The school had 20 teachers, 20 support staff, 125 regular and 40 special education students, many with severe disabilities. After extensive consultations, the surplus was spent to

- update the library with its "fifty-year-old books on Africa,"
- purchase materials specified in social studies, science, and curriculum guides,
- purchase physical education equipment, including snowshoes,
- provide three more microcomputers, with software and some release time for teacher familiarization,
- send teachers and aides to conferences, workshops, and inservice training, and
- provide two half days per year substitute time for teacher interschool visits and special education aides.

However, the examples mentioned actually show inputs into the educational process. They do not represent clear evidence that student learning has increased, although it is difficult to imagine learning being maintained without adequate resources to do the job.

There is also some evidence that school-based management may impede school efficiency, if process variables by themselves are viewed as indicators. Alexandruk(1985:112) reports that when teachers respondents were asked for the weaknesses of school-based management, the leading problem perceived by both principals and teachers was the "time factor," time spent in the planning process which might have been allocated more directly to learning.

Workloads in schools may have increased, but one principal reported that most large secondary schools had bookkeepers. Both groups were also agreed on the second-ranked problem, which was "allocation of resources," interpreted as the monies received by smaller schools and the lack of discretionary funds. This outcome reflects comments made in some interviews that larger schools were far better off under the original allocation formulae in Edmonton. Another possible source of inefficiency was the weakness ranked third by teachers, that of the "stress factor." It seems that the respondents associated stress with school-based management, perhaps in the process of determining priorities within their schools.

One idea connected to the theme of efficiency is that of innovation (Simon, 1957; Goodlad, 1984). If schools could be made more innovative, they might solve problems and seize opportunities creatively. When asked if school-based management was adopted because it might spur creativity among schools, a senior Edmonton administrator replied that it was not. However, he said that "it takes the chains off." Further, principals and teachers combined indicated that school innovation and initiative had been attained at the 50% level. But one elementary teacher perceived no incentive to innovate under the framework of school-based management. She expressed the view that it provided a structure in which schools might or might not innovate. For her, it created an awareness of the use of resources in the school. Very little qualitative evidence showing attempts at innovation is available from Langley. A likely reason for the lack of possible changes is the program of retrenchment (known locally as "restraint") which was imposed by the provincial government between 1983 and 1986. When resources are curtailed, schools most likely maintained programs as they could. Those years were also turbulent, for the province in general and teachers in particular. It may be unfair to judge the administrative model of school-based management under those conditions. One senior administrator in Langley stated simply:

"Restraint is the worst of all possible times to implement decentralization."

Output Changes

Unfortunately, evidence on changes in learning outcomes was not available from Edmonton. There are no yearly examinations mandated and no results were available to bridge the years before and after school-based management was instituted. In Langley, where testing is conducted regularly, it was considered too early to determine learning effect changes for a district which adopted school-based management wholly in September, 1985.

Output defined as learning outcomes may be the most valid way to define productivity for schools, but the satisfaction with that output is another way in which productivity can be conceived. As reported in the section on accountability, the annual survey of students, parents, and staff by Edmonton provides measures of satisfaction as shown by a variety of groups and levels within the

district. Fortunately, the survey was administered from 1979 to 1985, except for 1984. The patterns of satisfaction with the district services may be traced from before and after 1980, when school-based management was instituted for almost all schools. A complete analysis of such trends is well beyond the scope of this paper. However, Palmer and Mosychuk(1983) have provided some information of district-wide patterns from 1979 to 1983. This period is assumed to be sufficiently long to observe changes in the level of satisfaction if evident. Palmer and Mosychuk(1983) note that depending on sample size, a change of two two three percentage points is significant at the .05 level. Some excerpts from their report(p.3 and 4) are:

"...the satisfaction levels of Elementary level students with schooling has remained high and stable the [sic.] results for Junior High and Senior High students show increases for almost all areas."

These junior and senior secondary areas were:

"the usefulness of the school courses; the emphasis on basic skills such as reading, writing, math; the amount the students feel that they are learning and; the manner in which student discipline is handled."

Parental satisfaction showed "regular" increases for:

"the vocabulary/spelling/grammar component of language arts; second language programs; the manner in which student discipline is being handled; the amount of say that they have in school decisions that affect their child and; the assistance provided by the school in planning for the child's further education and career."

Staff levels of satisfaction remained generally stable with notable increases in selected areas. Some examples were:

"Communication throughout the District(16 percentage points)...recognition and appreciation for performance (16 points)...District communicating its goals, philosophies and policies clearly(20 points)..."

It may be useful to report some of the survey results from Palmer and Mosychuk(1983:7-55) more directly. Since the satisfaction of students and parents may be a more critical indicator of output than that of staffs, the results for student and parent groups are summarized briefly here. Levels of satisfaction were recorded on a variety of items from 1979 to 1983, each expressed as a percentage of persons who answered that they were satisfied with some aspect of school performance. Assume a 3% difference would be significant at the .05 level, as Palmer and Mosychuk have done. How many items showed a positive trend of 3% or more, how many were stable (plus or minus 2, 1, or 0%), and how many showed a negative trend of 3% between those two times?

When the results from kindergarten to grade six are examined, student satisfaction measures showed 3 up, 13 level, and 1 down. Parents registered 11 up, 12 level, and 0 down. Elementary students seem to show far less increase in satisfactions than parents. Junior secondary results (grades 7-9) are rather opposite. Students show 24 items with a positive trend, and none for level or down, while their parents registered 16 items up, and 0 level, 0 down. Both sets are rather positive, but students much more so. Senior secondary (grades 10-12) students indicate 21 up, 5 level and 0 down, while senior secondary parents register 16 up, 9 level, and 3 down, quite in agreement with the students. Many items show marked improvement, while the largest downward trend for the district as a whole was the senior secondary students' answer to "The organization of the school year (Semester, 10-month, etc.)" which declined from 92% to 84% satisfaction. Overall, students and parents appeared to be more satisfied with the educational services provided in 1983 than in 1979.

Clearly, the survey results merit a separate analysis to see what independent conclusions may be drawn. It would be useful to compare these results to the levels of satisfaction in other cities during the same time period. But, if the above evidence is correct, it seems fair to say that the satisfaction with the educational service has increased in Edmonton.

Cost Changes

As defined by Thomas(1980), the other aspect of efficiency is the resources required to undertake the tasks of education. Unfortunately, the cost data gathered for this preliminary study were very limited. A rough indicator is the cost per pupil for Edmonton, calculated in constant 1960 dollars. That figure was the same (\$1000) for 1979 and 1983. Thus, resources were not similarly increased for the period of impact of school-based management. This outcome is one indicator that efficiency has increased.

Summary

Process indicators of efficiency would suggest that some resources were put to more effective use in schools. The survey results show that productivity, in the sense of greater satisfaction with education, has increased. However, there was an absence of data on learning outcomes and very little cost data were gathered. As a result, it is not possible to judge clearly the effect of school-based management on the efficiency of the two districts.

V. DISCUSSION AND CONCLUSIONS

The purposes of this section are to indicate the apparent limitations of the research, to offer some conclusions, and to explore some ideas further.

Some Limitations

The present project is incomplete in a number of ways. It also has deficiencies which should be kept in mind when interpreting the results.

Substantive Omissions

One of the main omissions is some description and analysis of the way in which districts and school make plans and decisions under standard conditions, otherwise considered to be traditional or centralized management. Most respondents appeared to be making a comparison between professional life before school-based management was in place with district and school activities after it had been implemented. Yet centralized management deserves its own analysis of its strengths and weaknesses on such factors as flexibility, accountability, and others. No attempt to do this has been made in the present project, though respondents made comparisons and the topic is covered by Garms, et al.(1978).

Another major omission is the exclusion of an issue of some fascination for most administrators -- implementation. Because of the limited scope of the project, it was not possible to include the many interesting problems encountered in the two districts as they planned and executed the adoption of school-based management. It could be argued that how a change is made may affect the outcome of that change. If that is the case, different levels of success and failure with the model of school-based management may depend on how the major effort of implementation is carried out. A dissertation by Lloyd Ozembloski is now underway which will examine how school-based management is adopted within and across districts.

There are a number of other themes which have received comparatively little attention in the present paper. First is the topic of student equity or equality, the dominant subject of educational finance for over a decade(Odden, 1986). It is not known if important differences among interschool resources for students exist under school-based management. If these were found, then either the allocation system would be in doubt or the beliefs that principals are trustworthy and competent to "handle money" would be shaken.

A second topic is one of the cost-effectiveness of school-based management itself. There is a decentralization of "paperwork" to schools. Does this cost taxpayers more than centralized budgeting and bookkeeping for accounting of expenditures? The new office technology may be an important component of the cost-effectiveness theme. It could be that the move to school-based management would be much less manageable without school spreadsheets for budgeting and accounting programs to monitor dollar flows.

Third, there has been rather little effort made in this paper to pursue the possible links between the administrative structure of school-based management and the supervision of teachers or the

effectiveness of schools. It may be that the requirement for schools to plan combined with some accountability at the program level makes a difference to how principals monitor, assist, and evaluate teachers. And so there may be some important learning outcomes via teachers and other school processes reflecting the local decisions made.

Considering the quality of those decisions, a fourth theme is the assumptions of trustworthiness and competence on the part of school personnel. While Mintzberg(1983) would argue that they have more accurate information about school-level conditions, are their decisions of higher quality than those which might be made by an expert outsider? Do school personnel have the desirable professional knowledge and skills? Further, do they use school resources in a way which would be considered ethical to a detached professional educator? These last questions touch upon the self-interest idea raised by Boyd(1982).

A fifth issue connects to the role of experts outside the school. The user pay arrangement for central office services would give schools the opportunity to call for consultant assistance from universities, out-of-district professionals, consultants in private practice, or those on the district staff. Such a pool of human resources could infuse new ideas into the schools. Alternatively, district-level initiatives for innovation could be reduced.

Sixth is the set of constraints on the operation of school-based management. Closely linked to the implementation problem, the idea of constraints suggests that there may be very critical jurisdictional, collective agreement, and other differences among districts (such as size and geography) which impact on their ability to function divisionally. Such constraints have not been addressed in this paper, and even differences between Edmonton and Langley have been set aside.

Methodological Deficiencies

Some methodological limitations to the present study are also most evident. One is the restriction of the study to two districts. Others which have embarked on school-based management, such as Cleveland, Ohio, and Nelson, British Columbia, were not investigated though they have important differences from the present two. This restriction makes generalization less certain. A second limitation is the relatively small number of interviews conducted for the present study, particularly for a district the size of Edmonton. If the number of districts and interviews had been increased, the stability of the results would have been more assured. A third limitation is that the evidence gathered is fairly restricted in kind. It would have been helpful to include more quantitative data which reflected district financial and learning activities. A research paper by Rosalind Kellett is now being completed which looks at some of the financial impacts of the change.

The fourth methodological limitation is a very general one.

It is just not possible to say for certain that the possible outcomes, such as flexibility, accountability, or efficiency, were caused by the adoption of school-based management. Even when it seems evident that the outcomes have increased when school-based management was in effect, and even when respondents perceive the administrative change as the cause, it is always possible to attribute their increases to other factors. The present research could be strengthened if some of the plausible other factors were investigated. For example, levels of educational satisfaction in other districts could have been compared with those of Edmonton. For these reasons, the following conclusions should be taken tentatively.

Conclusions

What may be said about the results of this study? Let us examine each research theme in turn.

Structure

The two school districts studied appear to be considerably decentralized, judging from the method of lump-sum allocation to schools and the large proportion of dollars which is given to schools. However, the decentralization observed is organizational and not political, which means that it exists at the pleasure of the boards and schools are accountable to the boards. There are no parent advisory committees which act as neighbourhood school boards and make school personnel decisions (as suggested by Garms, et al, 1978). Other forms of decentralization as described by Mintzberg(1983) do not appear to have been explored.

The structure and aims of organizational decentralization as noted from the literature are generally compatible with the educational aims of the two districts and with the principles of organization which they espouse. The two beliefs that school level personnel are competent to make decisions involving resources and that they are trustworthy seem to be cornerstones of school-based management in these two districts.

More particularly, the organizational decentralization seems to have been a move from a structure which was horizontally decentralized (with decisions delegated to central office personnel) to more vertically decentralized (with school decisions). But, it is also selective, in Mintzberg's(1983) terms. It involves most supplies, equipment, personnel and maintenance decisions, but does not usually include utilities or expert services, which continue to be administered centrally. This arrangement is strongly parallel to the way in which state and provincial departments of education allocate resources and delegate decisions to school districts in order to provide some degree of local control(Benson, 1978).

Allocation systems are based on school enrollments and numbers of dollars per child. Such a method may provide an increase in the level of student equity, since dollars are directed to children. In contrast, the alternative was seen as

"squeaky-wheel budgeting," whereby dollars are more likely to follow successful lobbyists. The allocation system also appears to rest on the assumption that the units to which allocations are made are quantitatively comparable. The formulae appear acceptable to respondents. Budgeting is based primarily on the price of a teacher being set equal to the district average salary for all teachers. Such a pricing policy ignores differential contributions by teachers but may simplify decisions regarding the purchase of teacher services.

Flexibility

Respondents were largely agreed that there was a high level flexibility to plan and make decisions at the schools. It seems that the extent of flexibility has increased over that permitted under centralized management, particularly since personnel decisions are made at the school level. The relative uniformity of views on flexibility was quite noteworthy, since there were no positions taken which suggested that flexibility was the same or had decreased, though objective measures are lacking. As articulated by the districts, an effort was made to avoid standard rules. Those rules (as opposed to general policies), which could come from legislatures, departments of education, school boards, central offices, or professional associations, could have highly restrictive effects on the ability of schools to make flexible decisions. However, the two districts have apparently been able to permit flexible planning and decisionmaking within their respective policy umbrellas.

Accountability

Respondents indicated that a fair degree of accountability has been achieved in the two districts. This objective has resulted in some role changes at the board level, which is now more concerned with policies than rules, and at the central office level, where lines of authority (from superintendent to associate superintendent to principal) are now much more precise to respondents. Such a change may be quite distinct from the usual operations of school districts, where boards often make specific rules (e.g., each school requires one typewriter), and where central office administrators control resources required by schools (e.g., number of vice principals or textbooks).

The role on which school-based management has had the most impact is that of the principal whose satisfaction with decentralization is very high. Respondents perceive principals to be much more powerful, and while greater power of planning and decisionmaking may permit schools to solve problems, it may have created some other difficulties. There is a feeling of overwork among some principals. But they believe they are more educational leaders than technicians.

A major question for principals is the extent to which they are willing to share their power with members of their school staffs, particularly teachers. Leadership styles vary, and many have chosen a consultative approach to school administration.

Since there is no structural reason why decisionmaking needs to be shared, and since principals are highly accountable, Mintzberg's(1983) view of divisionalization seems correct. His idea was that there was no reason to believe divisional managers would further decentralize their units. However, teacher satisfaction with school-based management is moderately positive.

The annual survey of parents, students, and staff provides a form of accountability which seems to be valuable to personnel. Feedback to schools, on a reasonably detailed level, offers a method to locate problems, derive satisfaction, and to evaluate role performance, particularly of principals. The survey is a device which does not transfer control to clients (or owners, as the political economists would call them), but it offers a substantial mechanism for their input at the school level.

Efficiency

A number of examples of decisions taken by schools were found. These provide some basis for believing that schools in Edmonton and Langley may be offering an increased level of service. A few concerns, such as additional time demands on school staffs, detract from this possibility. It is clear that school-based management is not intended as a cost-reduction device. Except for small surpluses, whatever monies are given to schools will be spent.

One of the aims of decentralization is for school innovation or renewal(Goodlad, 1984; Mintzberg, 1983; Simon, 1957). Evidence gathered is too sparse to indicate that the adoption of school-based management itself leads to a greater level of school innovation. While the "chains may be off," there is no structural reason to undertake particularly creative activities, since the reward system does not provide a specific payoff for successful school-level innovations apart from potentially increasing parental, student, or staff satisfaction. As for the relation between inputs and outputs, there were insufficient data gathered to make any firm judgements about increased efficiency.

The surveys provide a key output measures for Edmonton. Results bridging the period before and after the introduction of school-based management clearly show considerable increases in the satisfaction of parents and students. And overall, levels of satisfaction appear to be high. The prediction of Mintzberg(1983) and the caution of Callahan(1962), that divisionalization of a public agency or a concern for efficiency would produce a form of goal displacement whereby schools would be counting paper clips has not emerged. The legitimacy of the survey results as viewed by the professionals interviewed appears to confirm this conclusion.

Capstone

School-based management is a remarkable mix of organizational and financial arrangements for districts and schools. Decentralization in Edmonton and Langley appears to be a

considerable change from the administrative structure and administrative processes of most school districts. While it is too early to make recommendations, it seems fair to state that according to the evidence gathered in this study, flexibility and accountability have been achieved and productivity appears to have increased. However, the limited data collected do not say for certain that schools under school-based management are more efficient than their counterparts under centralized structures.

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VII. APPENDIX

Variable Interview Schedule

1. Please give a general description of SBM as you know it.
2. What is the history of adoption of SBM in your district?
3. At what stage is implementation at present?
4. Please describe the method of allocation of resources to schools.
5. Kindly outline the budgeting process in your school.
6. How is information for budgeting obtained?
7. How are school budgets reviewed and controlled?
8. Can you offer any cost reductions as a result of SBM?
9. Has the level of service been increased? In what ways?
10. What are some new decisions made at the school level?
11. Are there are some noteworthy facilitators or inhibitors to the change to SBM which you have observed?
12. Did any special problems or conflicts arise?
13. What were the role changes of principals, staff, parents, and central office personnel?
14. How does the present financial climate affect implementation?
15. Are these some special factors not yet covered which are important to an understanding of SBM?
16. Do you have any special advice for those considering the adoption of SBM?