SCHOOL SITE DECISION MAKING:
A CASE STUDY OF THE EDMONTON EXPERIENCE

By

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School-Site Decision-Making (SSDM) has been widely discussed in Canada and the United States. The decision to implement SSDM represents a major departure from the traditional authority structure. It requires the concurrence of many key parties such as teachers, principals and school officials. Proponents believe that SSDM can help to improve the quality of schooling by giving more flexibility in curriculum content and deployment of instructional resources. It is for these reasons that the authorities in Singapore have been exploring various innovations which can help to improve the school system.

One of the most talked-about SSDM projects is the one launched by the Edmonton Public School Board in 1976. It is widely regarded as the "lighthouse" system of SSDM.

This report describes the studies carried out on two schools in the Edmonton system. One was a K-9 community school, the other a senior high comprehensive school. The case studies examined what happens when a major innovation such as SSDM is introduced - what the problems are, how they are solved, and to what extent the goals are achieved.
Of the problems which the innovation initially created, the most prominent was the lack of orientation and training of teachers and principals. This resulted in feelings of uncertainty and low commitment among teachers. They experienced increased stress mainly due to greater demands for participation in decision-making. Principals, on the other hand, had to adapt to a much expanded role.

Many of the goals which were envisioned by the originators of SSDM were met. Although there were limited comparative data between Edmonton schools and non-SSDM schools, there was evidence of improvements in student achievement on standardized measures at the district level. Curiously, though, in some subject areas, no increases were observed in the past two years.

The reduction of costs per student was not one of the objectives of this innovation. However, costs did increase over time from 1983. It is difficult to ascertain whether these cost increases are due to the particular needs of a large urban school system, with, for example, many non-English speaking newcomers, or to SSDM itself. However, there has been a 15% increase in teacher's salary over the last five years.

With respect to parental satisfaction levels, there have been significant increases since 1979 when the first surveys were conducted. In general, student levels of satisfaction are lower for
junior high school students than for elementary and senior high students. For reason of confidentiality, student attitude survey data on the schools studied could not be released for this study. Since the initiation of SSDM, student satisfaction levels have varied to some extent. Overall they are at a high level. To what extent this is due to SSDM is not clear since there are no data comparing Edmonton levels with levels in non-SSDM systems.

Finally, though teachers did express dissatisfaction with the additional work created by SSDM, their satisfaction levels were very high. The study revealed that their satisfaction came from working with children, not from the increased opportunity to participate in decision-making. Principals in Edmonton do express higher satisfaction levels than their counterparts elsewhere in Alberta. This is despite this study's finding that Edmonton principals assume greatly expanded responsibilities and suffer higher work-related stress.

These case studies indicate that SSDM has yielded some important improvements in school management. School officials seeking new ideas are urged to examine the lessons from Edmonton's experience and achievements.
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I am also indebted to the Edmonton Public School Board officials and the principals and teachers of the schools I visited. They gave their time and invaluable assistance in my study and went out of their way to make me feel welcome during my visits.

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On a personal note, I owe a special thank to my good friends G.M. Burke and P.N. Young for offering me unfailing support and assistance throughout the entire process.
CHAPTER ONE

SCHOOL-SITE DECISION-MAKING:

THE PURPOSE AND INTEREST OF THE STUDY

The question of school-site decision-making (SSDM) is of interest to many people and to many school systems. In countries such as Australia, Canada, and also in some parts of the United States, the devolution of budgeting and management power to schools and the decentralization of educational administration are being pursued with vigor.

As the researcher, I have a particular interest in SSDM because of my responsibility in the Singapore school system.

Over the past ten years, a most interesting development has occurred in the Edmonton public school district where there has been steady evolution to a highly decentralized approach to the allocation of resources, including placing major decision-making responsibility on the principal and teachers of each school. The Edmonton experience may hold ideas which are useful to Singapore educators in their search for a new model. It is in this context that I decided to carry out an in-depth case study of two schools in Edmonton.
Outline of the Study

This Chapter briefly summarizes the educational systems in Singapore and Edmonton.

Chapter Two surveys the trends in SSDM in other countries, and gives a review of literature on a range of reports and studies dealing with participative and school-site decision-making. It also establishes the need for a study of the nature, objectives, adoption, operation and perceived outcomes of SSDM in Edmonton schools. The research questions are stated and the method is defined. The delimitations and limitations of the study are noted.

In Chapters Three and Four, there is a description of how the innovations were implemented in two schools - an elementary/junior high school and a senior high school.

In Chapter Five, the findings of the study are discussed in relation to the research questions and to the practices reported in the review of literature.

Some observations of the study are contained in Chapter Six along with suggestions for school systems which are interested in SSDM innovations and further research.
Education System in Singapore

At the present time, Singapore officials are exploring various alternative strategies for bringing about change in the education system.

In Singapore, the aim of the education system is to educate each child to the maximum of his or her potential through the development of the "whole person". Recently there have been suggestions that educators need to approach their task more creatively. All this grows out of a national effort to ensure economic progress (Towards Excellence in Schools: A report to the Minister for Education, Republic of Singapore, 1987).

The Singapore system is highly centralized. It has come about as a result of history. The main intention was to ensure that all schools maintained "proper" standards and contributed ultimately to the general well-being of the country. The end result was that most schools tended to develop into duplicate copies of previous models. The principals and staff became activated on instructions from the central authority. There was limited flexibility and freedom, both real and perceived, for educators to take steps on their own, capable though they were of this. It was hard to tell one school from another.
This state of affairs was likely to prevail as long as schools were rigidly bound to a centralized system. Even those few schools, which had come to establish a certain distinctive standing for themselves, would sometimes be penalized and denied the prospect of greater achievements.

It is fortunate that in recent years officials in the Ministry of Education have begun to see the need for change. Some delegations of teachers and principals were sent to visit schools in Britain and the United States over the last two years with the objective of examining new ideas. These visits, among others, helped to develop the beliefs that the granting of greater autonomy to schools was a necessary precursor to greater creativity and innovation and that the prospect of greater quality in education rested at the level of the school.

There have since been discussions on what conditions are needed to allow greater flexibility and to lead to an environment in which student creativity and independent thought would emerge. Many leaders in business and government hold the view that a thinking and creative workforce is a prerequisite for economic growth and viability. Rather than have schools function only on the basis of instructions from the central authority, they should be encouraged to advance proposals of their own and become more effective educational agencies. In order to create or acquire a secure niche in the global economy of the 1990's, Singapore is bracing itself for a number of reforms. One of these is to find a new model of school management.
In his announcement that schools would be given more leeway to achieve excellence in education, the Singapore Education Minister, Dr Tony Tan, envisaged that one measure which would give more flexibility to schools is the setting up of independent schools. He commented that, "the move must be exhaustively discussed before a decision is made." Explaining his desire to give schools more freedom, Dr Tan said that till now, schools have been "implementors of government policies rather than initiators." He added that "It is becoming increasingly evident that to leave the initiative entirely to the Ministry is unlikely to bring about the qualitatively better education which we all hope to have." Giving more flexibility to schools would ensure that schools can respond more sensitively and quickly to the needs of their students and parents.

**Education System in Edmonton**

Edmonton, located in Alberta, Canada, is a district of 71,000 students and 3,903 teachers. It comprises 193 schools and has a budget of $307,337,000 (1986-87) which is funded 53% by the Province, 10% by a provincial levy on local properties, and 37% by local taxes. The cost per student was $4,931 for 1985-86.

The first tangible evidence of SSDM in Edmonton appeared in 1976 when a pilot project was established. At that time there were about 150 schools in the Edmonton jurisdiction and the central office was organized on a functional basis. School principals then
were responsible to several assistant superintendents, directors, and supervisors. The school superintendent announced that there would be a pilot project to find out how SSDM might work. Principals were invited to give their ideas on changes to the budgeting process and new ways of making decisions at the school level. Thirty-seven schools volunteered to take part in the pilot project, and seven were selected: three elementary schools, an elementary/junior high school, a junior high school, a senior high school, and a special vocational school. The criteria used to select the seven schools were the type of school, size, geographic location, and commitment to participate in the pilot project for two years. The advantage of starting with a pilot project was that it would provide an opportunity to work the idea out with relatively few people who welcomed the idea of change and were committed to its success. They would be able to correct problems and rectify mistakes in a sheltered environment over the term of the project. The sceptics would have ample opportunity to assess the perceived merits of the program in operation. These merits included the following benefits:

(1) Providing principals and teachers with an appropriate role in budgeting (subsidiarity);

(2) Achieving more efficient use of funds allocated to each school (efficiency);

(3) Providing schools with greater flexibility in developing their instructional programs (flexibility); and
(4) Encouraging and facilitating examination of the relationship between program objectives, program outcomes and the costs involved (accountability).

The characteristics of the selected schools are summarized below:

<table>
<thead>
<tr>
<th>Name of School</th>
<th>Type</th>
<th>Enrolment</th>
<th>No of Teachers</th>
<th>Location</th>
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<tbody>
<tr>
<td>Grosvenor</td>
<td>Elementary</td>
<td>173</td>
<td>8.4</td>
<td>West</td>
</tr>
<tr>
<td>Lynnwood</td>
<td>Elementary</td>
<td>442</td>
<td>22.0</td>
<td>West</td>
</tr>
<tr>
<td>Kensington</td>
<td>Elementary</td>
<td>360</td>
<td>17.7</td>
<td>North</td>
</tr>
<tr>
<td>Parkdale</td>
<td>Elem/Jr. High</td>
<td>460</td>
<td>22.0</td>
<td>North-Central</td>
</tr>
<tr>
<td>Hardisty</td>
<td>Junior High</td>
<td>765</td>
<td>38.0</td>
<td>East</td>
</tr>
<tr>
<td>M.E. Lazerte</td>
<td>Senior High</td>
<td>1850</td>
<td>93.5</td>
<td>North-East</td>
</tr>
<tr>
<td>W.P. Wagner</td>
<td>Special High</td>
<td>1100</td>
<td>82.0</td>
<td>South-East</td>
</tr>
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</table>

Each school received allocations for (a) certificated and non-certificated staff (using the same criteria employed for other schools in the system) and (b) amounts in dollars representing the estimated costs of all programs to be decentralized in the "services purchased", "supplies" and "capital outlay" categories (determined in 1976-77 on the basis of 1975 expenditure patterns in each of the seven schools). A budget was then prepared at each school to reallocate the available funds while observing the terms of collective agreements, school board policy and Alberta education curriculum guidelines. Average salaries were used as budget units in staffing categories (Caldwell, 1979).

The pilot project was monitored by the Alberta Teachers' Association, Edmonton Public local, but no formal evaluation of the pilot project was undertaken. It appeared that generally there was a favourable reaction to decentralized decisions regarding the acquisition of supplies and equipment.

In late 1979, after four years of the pilot project, the Edmonton Public School Board approved the administrative recommendation to implement school-site decision-making on a system-wide basis as from the 1980-81 school year. In the spring of 1980, a 20-month transitional budget was approved. The first eight months were covered by a centrally prepared budget, while the following twelve months (1980-81 school year) were drawn up in the new format. Principals were to be advised in early February of each
year of the guidelines for budgeting and the lump-sum allocation to their schools. School budgets were to be submitted to associate superintendents in mid-March of each year. Central office approval of school and system budgets followed in May of each year.

The adoption of school-based budgeting was just one component of a major reorganization of the Edmonton Public School district operations. Changes which preceded or followed the December 1979 decision included the appointment of six associate superintendents, each responsible for the administration of 25 to 30 schools in two areas of the city; a redefinition of the roles of central office supervisors and consultants; and a broadly-based program of monitoring activities in the system, with annual surveys of parents, principals, teachers, students and central office staff (Caldwell, 1980: 23). The primary objective of the annual survey is to measure student, parent and staff opinions relative to the following system purposes:

1. Students develop positive attitudes toward self, others, school and education;

2. The community feels the district is performing satisfactorily; and

3. The district's employees feel that the district is a good place to work.
The results of the surveys are used in a number of ways. At the school or branch level, the results provide reinforcement for what has been done, point out inadequacies, and indicate the need to develop plans for improvement in areas that are considered unsatisfactory. At the district level, the results provide general information and an indication of trends in key areas about the performance of the district and the schools.

The Edmonton approach of a defined staff involvement and a cooperative undertaking (ie collaborative links with the community) has led to some dramatic achievements as perceived by the School District. It has also caught the attention and interest of educators from other districts in Canada as well as other countries. As Caldwell and Spinks wrote, "It has become a 'lighthouse' for both Canada and the United States with conferences organized by the district in 1983 and 1986 drawing large numbers of participants from both countries." With more than seventy thousand students, this is probably the largest system in North America to have adopted such a comprehensive approach to school-site management (Caldwell & Spinks, 1988 : 18).
CHAPTER TWO

SCHOOL-SITE DECISION-MAKING:

PAST LITERATURE AND PRESENT STUDY

The School-Site Decision-Making (SSDM) system, a North American innovation, is also known as School-Site Budgeting, School-Based Management, and Decentralized Decision-Making. These terms are used interchangeably in this report, particularly in Chapter Two where past literature and other studies on the subject are reviewed. However, in the subsequent chapters, the term School-Site Decision-Making or SSDM is mainly used.

School decisions encompass at least the following nine areas: instructional coordination, curriculum development, staff development, evaluation, general school improvement, personnel, rules and discipline, general administration, and policy-making (Duke et al, 1980: 93).

Definition, Scope and Nomenclature of SSDM

SSDM stems from a belief that the individual school should be the fundamental decision-making unit within the educational system (Guthrie & Reed, 1986). Decentralization is not an aim in itself, but a means to achieving other aims more actively, dynamically, co-operatively and innovatively (Mclean & Langlo, 1985: 10).
The word "decentralization" embraces a multitude of meanings and interpretations. How much or how little decision-making is to be passed down is not cut and dry and varies from school district to district. However, they all have one thing in common. The school replaces the central office as the basic unit of educational management. The following definition of school-based budgeting is provided by Caldwell:

"School-based budgeting exists in a school system when the school board or central office administrators provide principals, in consultation with staff, with an opportunity to prepare and administer a budget for the allocation of resources at the school level, with such a budget to include allocations for certificated and non-certificated staff as well as for supplies, equipment, and services" (1980: 21).

Caldwell and Spinks (1988), in their book "The Self-Managing School," defined the term "resources" broadly to include knowledge (decentralization of decisions related to curriculum, including decisions related to the goals or ends of schooling); technology (decentralization of decisions related to the means of teaching and learning); power (decentralization of authority to make decisions); material (decentralization of decisions related to the use of facilities, supplies and equipment); people (decentralization of decisions related to the allocation of people in matters concerning teaching and learning, and the support of teaching and learning); time (decentralization of decisions related to the allocation of time); and finance (decentralization of decisions related to the allocation of money).
In the school-based budgeting process, school-based personnel are assigned authority to allocate funds to a variety of budget categories in accordance with priorities that have been established at the school level and are within guidelines defined by provincial statutes, school board policies, and collective agreements with employee organizations. The underlying belief is that decisions should be made by the operating unit that is closest to the area of involvement if it is competent. According to Griffiths et al. (1979), those members of an organization who are likely to be most affected by a decision should be involved in the decision-making process. The extent of the involvement should be related to the importance of the decision to the individual and the impact it is likely to have on his/her role in the organization (Bridges, 1967).

Efforts to increase the autonomy of schools have differed in scope and nomenclature (Caldwell & Spinks, 1988). In Britain, where the focus so far has been on decentralizing decisions related to the allocation of financial resources, the initiative has been described by pioneering authorities as Local Financial Management (Cambridgeshire) and the School Financial Autonomy Scheme (Solihull). In Canada, the initial focus in a "Lighthouse" Scheme in Edmonton, Alberta, was also on the school budget, with the practice described as school-based budgeting. With the introduction of teacher effectiveness programmes and school-by-school approaches to programme evaluation, SSDM became the preferred descriptor (Caldwell
& Spinks, 1988: 4). The change of descriptor also implied a shift in focus, that is, the school-site decisions which concerned the allocation of resources were not made in the narrow financial sense in all instances, but often in the broader sense in the areas of curriculum, personnel and facilities.

In Victoria, Australia, the general term "devolution" has been used to describe the sweeping change to the pattern of school governance which began with the enactment of legislation giving policy powers to school councils. The term "self-governing school" was used in a proposal to give a very high measure of autonomy to state schools meeting certain requirements. In the small number of districts in the United States where changes along these lines have been made, a financial focus was known as school-site or school-based budgeting, with a more comprehensive approach, especially where teacher and community involvement were sought (Caldwell & Spinks, 1988: 4).

The Rationale and Underlying Philosophy of SSDM

It is useful to briefly review some of the arguments in the literature offered in support of SSDM. The case can be presented from several perspectives drawn from fields of inquiry such as economics, politics and organization theory. Advocates have traditionally argued on these grounds but, more recently, appeal has been made to findings from research on the need for increased professionalism among teachers and school effectiveness.
**Political-economy.** Garms, Guthrie and Pierce (1978) contended that centralized budgeting, with relatively uniform allocations to schools and minimal opportunity for re-allocation, impairs the achievement of equality and efficiency and, by implication, of choice. Equality of opportunity is impaired because a centralized budget makes it difficult for schools to match services to student needs. Efficiency is impaired for the same reason but also for other reasons: centralized budgeting seldom provides incentives for efficiency, and frequently fails to foster diversity through which more efficient and effective approaches to teaching and learning may be identified. The solution, according to these writers, is school-site management, with lump-sum budget allocations to schools, a high degree of community involvement in school decision-making, and the fostering of diversity within and among schools to ensure choice (Caldwell & Spinks, 1988: 6).

**Organization Theory.** Ever since the now classic studies by Coch and French (1948) on overcoming worker resistance to change, an increasing emphasis has been placed on the participation of workers in certain areas of management decision-making. Such participation has been primarily noted in the industrial and business domains, particularly in Northern Europe and Japan, but only in the recent decade has there been much discussion of the value of participation in the education sector (Conway, 1978).
The involvement of the worker in management is the significant feature of quality circles. The underlying concept of the quality circle is that people closest to the product are most likely to develop creative solutions which will improve the quality of the particular service or product. As Luthans (1981) pointed out, "Decentralization recognises and actually capitalizes on the importance of the human element. Most important, decentralization gives an opportunity for individual responsibility and initiative at the lower levels."

Support for an appropriate balance of centralization and decentralization may be drawn from the field of organization theory. Perrow (1970), for example, suggested that the pattern of centralization and decentralization in an organization can be determined through analysis of the techniques or technology required to get the work done as well as the nature of the people with whom the organization must deal. For example, for techniques or technology, where few exceptional cases must be dealt with and problems are relatively simple, thus allowing for routines to be developed, a relatively centralized structure is appropriate. Where many exceptional cases are encountered, and problems are more complex so that non-routine processes are required, then a relatively decentralized structure is more appropriate. For organizations where people are central to the work, when people with whom the organization deals are relatively uniform in nature and the
processes for dealing with those people are well understood, a relatively centralized structure is appropriate. Where people are diverse in nature and the processes for dealing with them are not well understood, then a relatively decentralized structure is more appropriate.

Applying Perrow's analysis to education results in patterns of centralization and decentralization of the kind found in places where the self-management of schools has been encouraged. Many matters related to support services, such as student transportation or the distribution of instructional supplies, allow for the development of routines applicable to all schools, suggesting a relatively centralized structure for delivering such services. On the other hand, if pupils are seen as having diverse needs, with each school expected to provide programs to meet these needs, and if the nature of teaching and learning for each child cannot be well understood from a central perspective, then a more decentralized structure is appropriate. Thus, Caldwell and Sprinks concluded that

"It is evident that establishing an appropriate balance of centralization and decentralization requires careful analysis if this perspective is adopted. It is also evident that such analysis will be embedded in values related to the purpose of schooling and the nature of the child. For example, if education is seen as being concerned with a relatively narrow range of cognitive skills with the expectation that all children should have the same learning experiences in pursuit of similar outcomes and, further, if children are seen as similar in nature with little account of individual differences necessary, then a relatively high degree of centralization may be appropriate" (1988: 7).
An echo of this perspective from organisation theory may be found in the work of researchers such as Peters and Waterman (1982), whose studies of excellent companies led them to the identification of 'simultaneous loose-tight properties'. They found that excellent companies are both centralized and decentralized, pushing autonomy down to the shop floor or production team for some functions, but remaining 'fanatical centralists about the core values they hold dear'. The parallel in education is the centralized determination of broad goals and purposes of education accompanied by decentralized decision-making about the means by which these goals and purposes will be achieved, with those people who are decentralized being accountable to those centralized for achieving outcomes.

**Increased Professionalism.** Besides increased emphasis on participative management, there has also been an increasing demand for professional autonomy from teachers. The nature of these changes is noted in the following excerpts from professional literature:

"There has been a clear and persistent movement towards more participative management techniques in the educational enterprise. Such an approach fundamentally changes the authority relationship between the teacher & the administrator" (Belasco, Milstein, and Zaccarine, 1976 : 136).
"Teachers are becoming more capable of exercising a domain of professional expertise and are demanding a new role for themselves which includes greater professional autonomy and a larger voice in the school system's decision-making process" (Cox & Wood, 1980:6).

Increased autonomy for teachers and fewer bureaucratic controls have invariably been included as elements in the case for enhancing teaching as a profession. In the United States, for example, reports by the Carnegie Forum on Education (1986) and the Holmes Group (1986) advocated this course, with the latter setting a goal of making schools better places for teachers to work, and to learn: "This will require less bureaucracy, more professional autonomy, and more leadership for teachers."

School Effectiveness. In recent years, school effectiveness has become a major concern of educators. While the 1960's were marked by large national studies investigating the effects of input variables such as quantities of resources and student characteristics, recent research has focused directly on school processes. In the 1980's, a new belief is gaining credibility among educators, namely, that schooling does make a difference. Increasingly, however, the case for SSDM is being argued on the basis of findings from studies of school effectiveness. Some writers, after reviewing the characteristics of effective schools, have concluded that a form of self-management provides the best framework wherein these characteristics may be
fostered in all schools. Foremost are Purkey and Smith (1985), who, while expressing some reservations about the effective schools movement, concluded that "existing research is sufficiently consistent to guide school improvements based on its conclusions."

Purkey and Smith (1985) offered a model 'for creating an effective school' which drew from literature in four areas: classroom research on teacher effectiveness; research on the implementation of educational innovations and school organisations which identify the role of school culture in school improvement; research in workplaces other than education; and consistency between effective schools research and the experience of practitioners. Their models contain thirteen characteristics, nine of which can be implemented relatively quickly; the remaining four, defining the school's culture, take time because they require the development of an appropriate climate. The first group of nine includes school-site management and democratic decision-making wherein "the staff of each school is given a considerable amount of responsibility and authority in determining the exact means by which they address the problem of increasing academic performance. This includes giving staffs more authority over curricular and instructional decisions and allocation of building resources".
Four policy recommendations were offered by Purkey and Smith, each of which has implications for self-management. They included recommendations that "the school [must be] the focus of change; its culture, the ultimate policy target"; "resources, especially time and technical assistance, must be provided that will encourage and nurture the process of collaboration and participation necessary to change both people and structures in schools"; and "an inverted pyramid approach to changing schools [must] be adopted that maximizes local responsibility for school improvement while it recognizes the legal responsibility of the higher government levels."

Finn (1984) addressed another implication of the effective schools research when he called for "strategic independence" for schools. He noted that "the central problem faced by policy makers who attempt to transform the findings of 'effective schools' research into improved educational practice at state or local level is the tension between school-level autonomy and systemwide uniformity." His nine commandments for strategic independence included the recognition of the school as "the key organisational unit in the public school system". Finn's recommendations, along with the model of Purkey and Smith, are consistent with the contingency view of organisations offered by Perrow as far as centralization and decentralization are concerned: a point must be found in the continuum which provides for centralization of authority for some functions, but decentralization for others.
Research Project

This research project reports case studies which investigated the nature, objectives, adoption, operation and perceived outcomes of decentralized school decision-making in two Edmonton Public Schools - one elementary junior high and the other senior high.

Purpose of the Study. Little material has been written to explain why school-based management schools are achieving the levels of success that they are producing. As Brown (1987) wrote, "While extensive literature has been written on the Edmonton's approach, the empirical evidence about school-based management is sparse." This research project attempts to reveal the unique qualities and characteristics of the SSDM schools that help to explain their success. The project was undertaken specifically with the following purposes:

(1) To understand better the initial hopes and objectives that motivated the initiators of the SSDM project;

(2) To identify implementation problems, and document how these problems were addressed (what changes were made in procedures and in objectives, at both the central and school levels);

(3) To examine the evidence as to what the benefits and costs have been thus far to students, teachers, and the community; and
(4) To determine how adequate the Edmonton model is in helping school personnel make responsible decisions in a time of economic constraints.

The findings will add to the information already available on the development of SSDM. They will attempt to reaffirm the importance of decentralizing decision-making to schools, and provide a basis for further research on the factors contributing to the success of SSDM schools. Most important of all, it is hoped that the findings will help point the way for Singapore education officials to formulate a new model of school management to bring about excellence in education.

Research Questions. More precisely, the research addresses the following questions:

(1) Is there any evidence that SSDM has promoted
(a) leadership development;
(b) greater participation in the decision-making process at a lower level;
(c) an increased sense of responsibility?

(2) What evidence is there, if any, that SSDM has been a contributing factor for the following expected outcomes:
(a) raising the achievement levels of students;
(b) retaining students in school for longer periods of time;
(c) increasing speed with which decisions can be made concerning local issues;
(d) increasing administration efficiency and productivity;
(e) keeping unit costs of education within budget guidelines?

(3) Has SSDM enhanced the educational leadership role of the school principals?

(4) What do principals and teachers see as negative aspects of SSDM? Are the gains of SSDM worth the costs (ie are the costs of SSDM balanced by enhanced effectiveness/efficiencies/satisfaction)?

(5) In what ways have SSDM procedures aided or hindered the process of service/cost reductions which became necessary as a result of reduced funding to Edmonton schools?

Research Method and Case Study Site. This research project employs the case study method. Case study research does not involve the formulation of a prior hypothesis. Researchers attempt to suspend any preconceived ideas or notions that might undesirably influence the interpretation of what is being observed. They also
concentrate on the entire context and thus maintain a holistic view rather than focusing on bits and pieces. They attempt to maintain a perspective on the totality of the situation.

Data collection in a case study can be conducted through a variety of means: participant observation, interviews with key individuals, and surveys that may support or refute information collected through observation. Yin reported that, "The evidence of case studies may come from fieldwork, archival records, verbal reports, observations, or any combination of these" (1981: 58). The prime source of information in this study came from interviews with teachers of varying degrees of seniority, principals, and central office personnel. Apart from the interviews, there were two other sources of information: historical and evaluative documents provided by the central office, and research undertaken by others on school-based management.

The case study was limited to two schools - one elementary junior high and one senior high both in the Edmonton Public School District. The levels of schools were predetermined by the researcher but the actual schools were recommended by the Edmonton public school board. As requested by the principal, the name of the senior high school has been given the pseudonym "Lighthouse" to preserve its anonymity.
The elementary junior high school was the Strathearn Community School, which has a combined enrolment of students from kindergarten up to the grade 9 level. The school has a staff of 16 teachers (including the principal who is also a subject teacher), 1 community school co-ordinator, 2 secretaries, 2 custodians, 1 program aide, 1 library aide and 1 clerk. The school operated with an annual budget of $861,762 in 1986/87 for a school population of 257 students.

Besides the principal and his two assistants, the "Lighthouse" school has a staff of 42 teachers, 2 guidance officers, 1 business manager, 1 library assistant, 1 laboratory assistant, and 9 secretaries. The school operated with an annual budget of $2.77 million in 1986/87 for a school population of 1,011 students from grades 10 to 12. In Edmonton, the school budgets vary in size from $172,000 to $6.6 million among the 193 schools. About 90% of these schools operate with a budget of less than $2 million. The "Lighthouse" School is therefore considered one of the larger schools in Edmonton.

With the permission and assistance of the Edmonton public school board, the researcher was able to conduct interviews at these schools over two months (October to December) in the academic year 1987/88. Interviews ranged in duration from thirty to ninety minutes. The principals and staff answered questions about the
school without hesitation. When acceptable to the interviewee, interviews were recorded on tape. Otherwise extensive notes were taken. There was, without exception, full cooperation. The analysis of data here is very simplified: only the clearest of themes are pursued. Quotations are precise and considered representative unless otherwise indicated. Transcripts of the interviews were typed and the details verified with the two principals in May 1988.

The detailed descriptions of the Strathearn Community and "Lighthouse" schools are contained in Chapters Three and Four.

**Delimitations and Limitations**

The study is subject to the delimitations and limitations stated below:

1. The study was delimited to the sample of schools selected from the Edmonton Public School District in Alberta;
2. The study was delimited to the perceptions of principals and teachers on SSDM;
3. The limited opinions obtained through the interviews could have biased the results; and
4. Generalizations drawn from the study were limited to the schools selected for the study. However, the generalizations have some implications for other schools.
CHAPTER THREE

THE STRATHEARN COMMUNITY SCHOOL

Strathearn Community School is an elementary-junior high school with combined enrolments of students from kindergarten up to the grade nine level. The school is housed in a two-storey brick building constructed in 1952. The building is basically a horseshoe design and houses the general offices, gymnasiums, home economics and industrial arts facilities, library, music room, and classrooms. The school facility is available for community education, recreational, cultural, and social use on an extended-time basis, daily and yearly. Several churches and small business establishments are located within Strathearn Community. An outdoor skating rink with a change facility is located within walking distance of the school. In addition, the school has access to several bicycle trails which extend throughout the community and city at large. The proximity of Connors Ski Hill, Bennett Science Centre, Strathcona Wilderness Area, and the Kinsman Field Home allows the community school to further extend its curricular studies and activities. Housed within the school building is the After-School Child-Care Program which provides a child-care service for working parents whose children attend the community school.
Strathearn community is an established residential community composed of lower-income families living in subsidized housing. The majority of the students come from single-parent families and their parents are mainly blue-collar workers with less than grade twelve education. Only five percent of these parents are professionals. Senior citizens comprise a large majority of the current residents and several senior citizen residences have been constructed in the area. There are a number of small, well established businesses and services available in the community. The community league, having undergone a variety of changes owing to the changing population, has difficulty maintaining adequate support.

Change to Community School Status

Strathearn became a community school in September 1975 through funding from the project Co-operation Community School incentive grant. A community school means more than just a school building in the evenings. Inherent in the community school philosophy is the belief that each community school program should reflect the needs of its particular community. A community school provides a means to strengthen a sense of belonging for the people in the neighbourhood. It also provides the opportunity for people to work together to achieve community and self-improvement. The Strathearn School offers lifelong learning and enrichment opportunities in educational, recreational, social and related cultural services with the programs and activities developed for citizens of all ages, ethnic backgrounds and socio-economic groups.
Activities and programs are not confined to the school building itself because the school extends itself into the community. The Strathearn Community School Council was originally developed from the Parents Advisory Committee. The Community School Council draws its membership from the broad spectrum of the community. The project Co-operation Community School incentive grant officially terminated for Strathearn in August 1980. Because of the lack of funds, the Community School Council was unable to retain a co-ordinator at that time. Strathearn Community School received an official provincial designation on April 1, 1982 and has continued to operate under provincial guidelines since then.

Review of the Community School

An Evaluating Team comprising personnel from the Alberta Education Office and Recreation & Parks Personnel was formed in 1987 to conduct a review of Strathearn Community School to determine if the community school program expenditures were in compliance with Alberta Education Community School grant conditions and regulations. The evaluation team report (1987: 6) indicates that "the evaluators are impressed with the efforts of the school to function as an integral part of the community." Among other things, the evaluation team noted the following achievements by the school:

(1) It has involved the community in special events;
(2) It has made the Community Resources Inventory Bank (CRIB) available;
(3) It has invited seniors and others into the school to be involved in studying and recording historical and cultural events;

(4) It has made use of the local environment and facilities for educational purposes;

(5) It has involved parents in many ways (special events, lunchroom, school barbeque). Some have even taken part in the school programs such as teaching classes after school and in the evening, tutoring children, or even acting as a resource person in the classroom;

(6) It has supported and encouraged the Parent Advisory Council;

(7) It has kept channels of communication open between and among all stakeholder groups;

(8) It has accepted and utilized public input in writing and publishing the school newsletters; and

(9) It has involved students in developing and implementing school projects. An example of this is the Senior Reach-Out Program where students help seniors on a regular basis with odd jobs, gardening and shoveling of snow (p. 7).

A recommendation was subsequently made by the evaluation team that the Charter of Strathearn Community School be extended and that the school continue to receive the designated grant.
General Description of Strathearn School

This section contains a general description of Strathearn under the headings of staff, budget, student enrolment, programs and control.

Staff. At the year-end of 1987, the school had a staff of 16 teachers (including the principal who is also a subject teacher), 1 community school co-ordinator, 2 secretaries, 2 custodians, 1 program aide, 1 library aide and 1 clerk. The turnover of teachers since 1979 is considered to be drastic:

<table>
<thead>
<tr>
<th>Year</th>
<th>No of Staff (In)</th>
<th>No of Staff (Out)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1979-80 to 1981-82</td>
<td>10</td>
<td>13</td>
</tr>
<tr>
<td>1982-83 to 1984-85</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td>1985-86 to 1987-88</td>
<td>11</td>
<td>7</td>
</tr>
</tbody>
</table>

The year 1985-86 was the only year where no change in the staffing position was experienced. A total of eleven new teachers have joined the school since 1986-87.

Budget and Student Enrolment. There were great fluctuations in the budget allocation over the last few years. The school operated within an annual budget of $861,762 in 1986-87. The proposed budget for 1987-88 stands at $727,359 registering a decrease of $134,403 (16 percent) due to a smaller school population. The enrolment stood at 257 in 1986-87 but it dropped to
222 students in 1987-88. The enrolment pattern of the last few years is given below. The changes of cost per student are also indicated based on the budget allocations over the last few years.

<table>
<thead>
<tr>
<th>Year</th>
<th>Student Enrolment</th>
<th>Budget ($)</th>
<th>Cost Per Student ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980/81</td>
<td>385</td>
<td>741,731</td>
<td>1,927</td>
</tr>
<tr>
<td>1981/82</td>
<td>375</td>
<td>832,007</td>
<td>2,219</td>
</tr>
<tr>
<td>1982/83</td>
<td>371</td>
<td>938,632</td>
<td>2,530</td>
</tr>
<tr>
<td>1983/84</td>
<td>331</td>
<td>846,788</td>
<td>2,558</td>
</tr>
<tr>
<td>1984/85</td>
<td>324</td>
<td>834,529</td>
<td>2,576</td>
</tr>
<tr>
<td>1985/86</td>
<td>286</td>
<td>785,771</td>
<td>2,747</td>
</tr>
<tr>
<td>1986/87</td>
<td>257</td>
<td>861,762</td>
<td>3,353</td>
</tr>
<tr>
<td>1987/88</td>
<td>222</td>
<td>727,359</td>
<td>3,276</td>
</tr>
</tbody>
</table>

The teaching salaries accounted for 63 percent of the budget in 1986-1987, and 71 percent in 1987-1988. (Staff costs in each budget are based on average salaries plus benefits, rather than the actual salaries paid to staff in each school.) The reduced student population at all grade levels since 1985/86 and a moderately high transciency rate are a reflection of the general age of the neighbourhood. Consequently, the program needs to be continually adapted to provide for the needs of the various stakeholder groups. Almost 90 percent of the students are residents of the community despite the open-boundary system in the Edmonton Public School District. Ninety-five percent of Strathearn's students are Caucasian, four percent are Native Indians, and about one percent are Orientals.
Programs. In order to meet the academic and social needs, various integrated programs, including regular, adaptation, academic challenge, pre-vocational, English as a second language and extended French, are offered. The adaptation program is designed for students in elementary and junior high school who have had a severe delay in academic functioning which is not directly related to: (a) Mental handicap, or (b) English as a second language. The academic challenge program is intended for students in elementary and junior high school with superior intellectual ability and academic achievement. The pre-vocational program is for students of high-school age with continued academic difficulty and/or failure, having a desire for a vocationally-oriented program. The English as a Second Language program is meant for students whose facility with spoken and written English seriously impairs their ability to function in other district programs. The extended French programs were initiated in grades four and seven. The grade 4/5 program follows the "Promenade" series which emphasizes participation in games, songs, drills and skits. The grade 7/8 program follows the "Vive le Francais" series which stresses the systematic development of the four language skills (listening, speaking, reading and writing).

Control. Discipline at Strathearn is based on the belief that all individuals must be responsible for their activities and that everyone has the right to the respect of others, thus enabling them to learn in a safe environment. The school perceives that the
most effective method of developing self-control and respect for others in a school setting is for parents and teachers to work as a team so that they are recognized by the children as being deeply concerned with their welfare and growth. If a student chooses to misbehave through disruption or disrespect, he/she may suffer a loss of privileges such as special events or extra-curricular activities or may be subjected to detention after school. On further offence, the principal will consider other avenues such as in-school suspension, counselling, short-term suspension or corporal punishment. If necessary, parents are contacted for support in solving the problem (Strathearn School Handbook, p. 29). Though discipline is not a problem in Strathearn, some teachers expressed the view that students were comparatively more demanding, thus, requiring more attention and efforts from them.

School-Site Decision-Making Project: Initial Stage

Like all other schools, Strathearn receives a global budget each year to manage the school. Many functions used to be controlled by the central office. Now, custodial services, maintenance and even purchasing of supplies are decentralized to the level of the school. Similarly, decisions related to special educational services become the responsibility of each principal, rather than being controlled centrally. The school can purchase the services and supplies it needs from the central office or from outside suppliers, and pays for these purchases from its own budget. The principal is held accountable for the manner in which resources are allocated.
When SSDM was first implemented, there was less constraint on financial resources than what is experienced today. The principal and teachers had sufficient funds to carry out various curricular and staff development activities which they believed best met the needs of their particular school. In short, they had control over their budgetary items.

Teachers still had vivid memories of centralized procurement procedures under which, for example, they had to wait two or three months to obtain typewriter ribbons. During this waiting period, the school received shipments periodically of things that were not so urgently needed. SSDM eliminated this sort of situation.

Since the inception of the SSDM system in 1979, Strathearn has been headed by three principals. The first principal left one year after SSDM was implemented system-wide. The second principal held the principalship between the years 1980-81 and 1984-85. He asked to relinquish this position and has been teaching in a high school ever since. The present principal assumed duties at Strathearn in 1985, after heading an elementary school for four years.

The second principal (1980-85) reported that the budgeting process established then by central office for all schools consisted of four major tasks:
(1) To set program priorities for the coming school year;
(2) To identify specific objectives which were consistent with the priorities;
(3) To allocate funds in such a manner that the objectives could be achieved; and
(4) To specify the ways in which the achievement of objectives were to be measured.

The process began in January and the bulk of the work was completed by the end of March. He was given "carte blanche" to develop his own procedures for involving teachers in the budgeting process. During his term, a Budget Committee was set up with three staff involved (members of the committee changed each year). The Committee worked out a preliminary plan on budget allocation based on proposed priorities. The plan was then submitted for consideration at the staff meeting (held monthly).

This study includes interviews with the second principal (1980-85), the present principal (1985 to-date), fourteen teachers, one co-ordinator and two secretaries. This accounts for 75% of the total number of staff at Strathearn.

Among the fourteen teachers interviewed, four had not begun to teach when SSDM was first introduced in the school. The other ten teachers indicated in the interviews that they had not been involved actively in the initial years. Beginning in 1982 and 1983, Strathearn teachers recounted that they began to be more
involved when the concept of decentralization was more internalized. For example, they were asked to help set priorities and to establish certain budget allocations. Since 1985 when the present principal assumed her duties, teachers' participation in decision-making has been even more actively solicited.

Problems Encountered During the Initial Stage

SSDM involved changes in attitudes as well as changes in procedures. It called for the development of new skills on the part of teachers and principals alike. Leithwood and Fullan (1984) identify the following factors as normal concomitants of change:

(1) Significant classroom and school change is a time-consuming process; it also requires constant attention and problem solving;

(2) The initial states of any significant change always create anxiety and uncertainty;

(3) A fundamental requirement for long-term, successful change is for people to understand the underlying conception and rationale; they must know why the new way works better; and

(4) Organizational conditions within the school (peer norms, administrative leadership) and in relation to the school (for example administrative support and technical help) have a critical bearing on the success of the change process.
The second principal and teachers were asked to recall problems encountered in implementing the SSDM project. These are summarized and discussed below along with a number of concerns expressed by different individuals.

**Insufficient Lead Time.** The second principal and most teachers (11 out of 14) perceived that the initial process took place with considerable haste. They also recalled that change occurred with tension and fear as "SSDM was implemented suddenly following a pilot run at seven schools. There was too much pressure on principals who had no experience in coping with the demands." In comments on this aspect, the typical remark was "It would have been better if the change could have been introduced less suddenly. You live day to day in a school so the changes seem sudden." Most teachers indicated that more lead time should have been provided for them to get used to the proposed innovation as this would have helped to allay fear and tension.

Even though principals and teachers were advised more than one year in advance that a new system was to be instituted, nonetheless, the perceptions of teachers were that innovation was "rushed", and was introduced "suddenly".
Insufficient Information Related to the SSDM. It was also pointed out by all interviewees that the advantages of decentralization were at no time communicated to teachers in sufficient detail to enable them to understand fully and accept the new system. Teachers also claimed that there was a lack of information related to the budget and the budget process. Teachers' fear of the new and unexplored was never significantly allayed. The second principal also reported that "There was a lack of clarity on the roles and responsibilities of the principal. Principals could no longer act with the certainty of the past. Had the central office clearly indicated to principals their degree of freedom, principals might have acted more confidently."

Insufficient Time to Learn New Skills. The second principal and teachers thought that they did not have time to learn the necessary skills to perform tasks which had not been previously required of them. They were convinced that such a program could not work if the people responsible for its operation did not have the necessary skills. Some teachers described the situation then as, "It was like the machine required was in place but people really did not have the driver skills to switch it on and go barreling down the highway." Others, while not sharing this idea exactly, felt strongly that the lack of skills was one of the major problems encountered. According to them, they needed help in the areas of setting goals, standards and objectives, and the knowledge of converting these into strategies and plans. Even the secretary of
the school felt that she was "rushed" into handling some work that she was not trained to do. She experienced great difficulties in handling of accounting and in coding budget requests. The second principal and staff believed that with adequate training of principals, teachers and school staff, the objective of involving staff in the decision-making process in order to obtain their motivation and commitment would have been more fully realized.

The Problem of Involving Teachers in Budget Planning. The second principal reported that initially there was a problem in getting the involvement of teachers in planning the budget. He recalled that teachers then were not too enthusiastic; they preferred a plan to be worked out by him first. He added "With the plan in hand, teachers might make comments here and there but they did not wish to spend much time to come out with their own plan." At that time, a few teachers even opposed the concept of school budgeting and failed to see any merit in the process. The second principal said "Teachers felt that SSDM had very little effect on what is actually going on in the classroom. Generally they seemed to feel 'leave me alone and I'll do my job'." There was also a tendency among teachers to think of school-based budgeting in terms of business management rather than in terms of educational decision-making. The teachers' modal remark was "We are not economists, we are here to teach!" This was a natural reaction since, as recorded earlier, the advantages of SSDM were not adequately communicated to teachers.
More Paperwork Required. The second principal and teachers recalled that a lot more paperwork was required by the central office initially. This paperwork included the projection of pupil enrolments, the calculation of costs from the basis of allocations to the school, and the provision of regular, timely, and accurate financial reports. Moreover, schools were expected to record the priorities set by each subject area, thus demanding more time and effort. (Today, details required for financial reports have been reduced and schools are only required to set overall objectives and priorities for the school as a whole.)

Work-Related Stress. The second principal and most teachers reported their experiences of stress during the initial stage of SSDM. The second principal stated that many aspects of school-based budgeting contributed to his experience of overall work-related stress. Firstly, there was an additional time demand on himself and teachers for preparing the budget. Secondly, under SSDM, the burden of responsibility for the budget was shifted from central office to principals. Thirdly, the process of school-based budgeting increased the potential for conflict between staff and principal and animosity among teachers. These negative aspects were also recounted by a few teachers. One of them explained "School-based budgeting has created infighting ... and this has created stress. I am an English teacher and my budget is $5,000. When I see $10,000 being spent for student activities, I become upset."
Another frustrating aspect as recounted by the second principal was the fact that principals had become visibly responsible for the operation of the school while being restricted by inadequate allocations and external constraints. He also perceived the writing of goals and priorities annually as an academic exercise and commented "I was tired of having to put so much effort on these papers which were meant for show only. I was also tired of having to please the central office all the time."

Accountable for Performance Without Full Control Over Teachers and Students. The second principal reported that "To me, the most objectionable aspect of the SSDM lies in the fact that principals are held accountable for the performance of the outputs [meaning the students]." He added, "People in the School Board assume that a specific input subjected to a specific process will always produce a specific output. This model may work in physics but not in education. It is unreasonable measuring the outputs of the educational process (student performance) to assess the quality of the process (school effectiveness, activities and procedures). This is because the quality and nature of the significant inputs such as students and teachers are often not controlled by the principal. Principals may be in a position to control resources but they are the least significant of the inputs. Is it reasonable, then, to give principals control of such a small portion of the inputs and then to hold them accountable for the outputs?"
Although principals are free to hire and fire personnel under SSDM (which means they have control over one of the major inputs), the second principal felt that he could not do much with the existing staff whose attitude and performance did not meet with his expectation.

Intermediate Developments

Some developments which took place during the intermediate stage were recorded.

Shift in Areas of Concern. Teachers initially were more concerned with those areas which were "distinctly instructional rather than administrative." However, they became more interested in budgetary decision-making when they discovered the relationship between the budget and what was possible for them to do in their classrooms.

"Adaptable" Leadership Styles. The second development concerned the change in the second principal's own leadership style. At the beginning, he had to employ a more "authoritarian" leadership style and make unilateral decisions with only an occasional effort to obtain teachers' opinions and ideas. The style employed, though not consistent with school-based budgeting, was
based on the initial situation as described earlier, that is, teachers were not interested in spending too much time and effort on management decisions and that they preferred a plan be made by the principal with their inputs included later.

As time progressed, teachers became more appreciative of the objective of school-based budgeting. Teachers recognised that many possible programs could be offered in a school and these could be implemented in a variety of ways. Decision-making regarding educational programs was thus to be open-ended and called for the consideration of alternatives. It became doubtful that the information and expertise required to identify and weigh alternatives should be vested in only one person. These factors suggested the wisdom of shifting from an authoritarian leadership style to a consultative leadership style, since teachers were more willing to provide inputs. Solicitation of teacher input at that time was no longer perceived by teachers as the principal wishing to "cover" himself.

The full participative leadership style (also referred to as group leadership style by Likert, 1967; Vroom & Yettin, 1973) which involves teachers and the principal together in collaborative decision-making was the desirable leadership style under school-based budgeting. However, the second principal commented
that, 'Desirable leadership styles and feasible leadership styles may be two different things.' He expressed doubts about the feasibility of involving teachers fully in all decisions related to the school operations. He viewed that the teachers themselves also gave no indication of desiring a role greater than that of providing input for the principals' decision-making.

Problems Encountered by the Present Principal since the Assumption of Duty

After working as a principal under the SSDM system for a few years, the second principal decided to relinquish the principalship in 1985. The present principal, who was formerly a vice-principal in an elementary school, took office in late 1985. The problems which she encountered after her assumption of duty are discussed below.

Unwillingness to Participate. Although most teachers prefer principals who involve teachers in decision-making, there are individuals who, as the concept of "zone of acceptance" implies, do not wish to participate in any decision, particularly in those for which they do not have a personal stake. This was the situation faced by the present principal when she first took office in 1985. Moreover, some teachers were inclined to think that although it was
relatively easy to involve staff in a small school, there was so little flexibility in the budget that involvement hardly seemed worthwhile.

**Diversion of Human Resources.** Another problem which persists even today is that teachers perceived that human resources were being diverted from the main purpose of the school, that is, the teaching/learning process, to administration. For many dedicated teachers, these additional responsibilities disrupted what they saw as their major task, as the following comments from teachers illustrate:

"SSDM has caused disruption to teaching and distracted teachers from their main job of teaching children. The people in the central office forget that you are so involved with teaching kids. You want to be there with the kids and in the primary school, you have to be in the classroom most of the time. When do you have all the time to read the documents and attend all the meetings?"

The present principal confessed that teachers have been in this difficult situation ever since SSDM was implemented. She remarked that "This situation seems insurmountable to me. The job of the teacher is much more difficult than ever. Sometimes I almost feel guilty asking them to do more things. They are constantly pressed for time."
Increased Work Load. The present principal reported that her duties as principal had increased significantly. She had to oversee budget, maintenance, caretaking and rentals, which detracted from her ability to be a principal teacher. Moreover, all principals were now expected to assume a more public role, interacting with people in the wider community, forging links between the school and its environment. She said "The principal must now assume a PR role in the community, performing tasks which in the past were optional. There is now a new network associated with community involvement. I must make efforts to have the school and its achievements publicized in local papers." As Strathearn is located in a lower socio-economic area where parents are unaccustomed to participating in school decision-making, she reported spending considerable time "running around trying to increase the number of parents prepared to serve in the School Council and be involved." While such activities contributed to a more varied and fragmented professional life than that experienced by her in the past, they also contributed to a greater incidence of stress.

Present Situation

The present principal that there is more direct communication between schools and the central office today. The contributing factor could be the new principle of organization introduced under SSDM, namely "Each individual shall have only one supervisor."
Since SSDM was put into effect, some form of adjustment had been made every year to the formulae which were used for allocating funds. All these changes were believed to have been implemented in hopes of finding a more equitable basis for allocations. Another major change was that initially there were limitations of a narrow focus on finance. Progressively, the financial plans reflected educational plans, ensuring that resources were allocated to meet priorities among the special needs which were identified for the school.

The present principal recognized that one of her main tasks was to help teachers understand the SSDM process in greater depth and to resolve any problems/issues in more challenging ways. She was confident that "change is more likely to be accepted if a consistent philosophy is developed."

The present principal and most teachers recognized that SSDM had been more favourably received at the school following stabilization of the change. The teachers also pointed out that they were entirely happy with their level of participation. They were also satisfied with their more defined role, responsibility and expectation. Some significant outcomes highlighted by the present principal and teachers are discussed below.
Budget Preparation Procedures. Important procedures for budget preparation have been developed which leave no room for uncertainty or confusion. These procedures specify the occasions when staff are to be involved and also when parents and students are to be consulted. The procedures are outlined in Appendix I. The process is managed by a budget committee headed by the principal. There are seven people on the Committee: the principal (chairman), the counsellor, two teacher representatives, one parent representative, the student council president and the community school coordinator.

Average Teaching Time. SSDM has made it possible for school staff to become more directly involved in developing educational plans to meet the needs of the students in their schools. This is evident from the fact that some schools have chosen to operate with smaller classes by having teachers teach for 1400 minutes per week, while others have chosen to reduce the amount of instructional time by organizing correspondingly larger classes. The general pattern sees elementary schools choosing smaller classes with an average teaching time of 1384 minutes per week, and high schools opting for larger classes with an average teaching time of 1307 minutes per week. In Strathearn, the average duration spent in instruction per FTE (Full Time Equivalent) is 1387.4 minutes per week. (The highest average teaching assignments stand at 1400 minutes.)
Student Achievement. The newly designed ways to evaluate students in years 3, 6, and 9 at Strathearn reflect some excellent results in 1986-1987. The majority of students in year 3 met the Grade 3 benchmark for Edmonton Public Schools in Language Arts, Mathematics and Science. Students at the year 6 level performed extremely well with 83 percent meeting the Grade 6 benchmark for the system in Language Arts, and 73 percent meeting the benchmark in Social Studies. Seventy percent of the students met the Grade 9 benchmark for Language Arts, and 72 percent met the benchmark in Science.

Student-Parent-Staff Attitude Survey. The Edmonton Public School Board conducts an annual survey of the staff, students, parents and community. The primary objective of this survey is to measure student, parent and staff opinions relative to the following school system purposes:

(1) Students develop positive attitudes toward self, others, school and education;

(2) The community feels that the district is performing satisfactorily; and

(3) The district's employees feel the district is a good place to work.
In order to obtain this information, questionnaires were administered to random samples of approximately 16,000 students and 15,000 parents as well as to all staff in the school district (figures based on the last surveys - 1985 and 1986). The one-page student and staff questionnaires were completed at the schools. Questionnaires for the parents were mailed out and followed up by telephone to ensure a high rate of return. The parent portion of the survey was handled entirely by Monitoring & Assessment Services Staff at the central office. The response rates of these surveys normally exceed ninety percent for each group of respondents. The information is used to guide the School Board's decisions in meeting student and community needs. Strathearn monitors this survey very closely every year. The 1987 parent attitude survey reflected very positive aspects of Strathearn School and its program. The results are summarized as follows:

(1) For grades K to 6, over 90 percent of parents responded positively to a total of eighteen areas. Some examples are

(a) Offering and emphasizing right programs and extra-curricular programs;

(b) Handling of student discipline;

(c) District using money in a reasonable manner;

(d) Principal, teachers and non-teaching staff are friendly and helpful;

(e) Library service;
(f) Information about child's learning progress; and

(g) Involvement in activities.

(2) The areas requiring improvement include those where less than 85 percent of the parents were satisfied. These were:

(a) Superintendent of Schools;

(b) District's programs and achievements; and

(c) Involvement in school budget planning.

(3) For grades 7-9, over 90 percent of parents responded positively to a total of seventeen areas. Some examples are

(a) Offering and emphasizing right programs;

(b) Students sufficiently challenged;

(c) Satisfied with teachers, principal, superintendent, board of trustees, and non-teaching staff;

(d) Library services; and

(e) School's programs and accomplishments.

(4) The areas requiring improvement include those where less than 85 percent of the parents were satisfied. These were:

(a) Guidance and counselling service;

(b) District's programs and achievements;

(c) Child likes school;

(d) Involvement in activities and programs; and

(e) Involvement in school budget planning.
Despite all the initial problems which the innovation created, the Strathearn School today is able to achieve the goals envisioned by the originators. On the whole, the school has dedicated and committed staff and satisfied students and parents.
CHAPTER FOUR

THE "LIGHTHOUSE" COMPOSITE HIGH SCHOOL

The "Lighthouse" Composite High School, which celebrated its 79th birthday in October 1986, is the oldest high school in Edmonton.

When it was completed in 1907, "Lighthouse" Composite High School was described as the most modern school in Alberta. Among its many features were a well-equipped chemistry and physics laboratory and the newest device in heating control, a thermostat. In the fall of 1955, the school moved to a new location, adjacent to the South Side Athletic Grounds. The school has occupied the same building ever since. The building is three storeys high with red pressed brick.

Within its imposing brick structure, long halls with high ceilings are lined with single-teacher classrooms. Offices, cafeteria, gymnasium, a fine and large library, and other service facilities have their place inside the rectangle of academic corridors. A special feature worth mentioning is the spacious staff room which is located on the second level of the main building. Staff in "Lighthouse" meet here daily for morning coffee and lunch. The playing fields form a large part of the school compound. They lie to the south of the buildings and are set against an agreeable background of low houses.
"Lighthouse" is for children of grades ten to twelve. The school has the reputation of being a "good school" : the visual impression is one of business, of serious purpose, tradition and stability. This impression carries over from the architecture to the organization of the school. Like the building, the organization is traditional. The principal is the business manager, the teachers are organized by departments but teach as individuals in their own classrooms. The students are classified by grade. The principal and his assistants keep the school running smoothly; the teachers meet their classes; the students earn the required credits. The atmosphere is tolerant and studious, and the purpose of being at school is seen as qualifying oneself for entering college or getting ready to enter the job market.

"Lighthouse" Community

The school is located in a middle-class neighbourhood on the south side of the city. The school itself touches and intermingles with the town. The neighbourhood immediately surrounding the school is made up of families, with most of the parents working in white-collar jobs. Small business owners, trade people, government employees and retirees also live in the area. There are less dramatic ranges of wealth and poverty here than in some other parts of the country. The casual dress of the students minimizes social class distinctions. The few minority students are Black or Asian, with fewer Native Indians.
School Organization

The principal of "Lighthouse" is assisted by two vice-principals who are associate leaders. They and the principal share the tasks and responsibilities of administration within the school. However, the principal holds the ultimate authority. The tasks are divided in such a way as to utilize the skills of the members of the partnership. "Complementarity of talents" is the principle adopted at "Lighthouse".

The administration has also delegated some supervising authority and administrative powers, including program development and review, to departmental heads. They function as teachers as well as departmental administrators. Including the library, there are a total of ten departments (Business Education and Home Economics, English, Fine Arts, Music, Industrial Education, Library, Mathematics, Modern and Classical languages, Science and Social Studies). Such a structure compensates for limitations of the instructional leadership time of senior administrators.

There is growing research evidence that the more effective elementary schools are those where administrators take an active role in instructional leadership (Jones, 1988). The situation with respect to senior high school is less clear. Most secondary school administrators report that most of their time is used for non-instructional tasks or purposes. Jones (1988) has suggested that when the department heads take on the role of instructional leader, then programs will be more effective. This also seems to be
more acceptable. On the one hand, there is a provision of leadership; on the other hand, this leadership has come from the expertise within the department. This type of structure appears to be acceptable at "Lighthouse".

At "Lighthouse," a department head engages in a variety of activities, including (1) setting objectives for the department; (2) assessing the appropriateness of the program of studies; (3) developing instructional plans; (4) assisting individual teachers; (5) planning and encouraging innovations; (6) maintaining standards; (7) obtaining the resources that are needed by the department; (8) organising the department program; and (9) representing the department and advising the principal of needed changes ("Lighthouse" School Handbook 1987/88 : 23). In addition, the department head is expected to exercise considerable influence upon the development of policies for the school.

Thus, the administrative team consists of the principal, two assistant principals and ten department heads. There is yet another decision-making body, namely the School Council. The School Council comprises the following members: the principal, two assistant principals, ten department heads, the business manager, the head of the secretarial group, the student council president and two parents. The constitution is unique in that this Council solicits inputs and involvement of representatives of all concerned in the operation of "Lighthouse". The principal, however, is responsible for making any final decision.
The School Council meets once every two weeks. The main task of the Council is to set objectives and determine the required fund allocation. For example, one important objective in 1986/87 was to reduce class size to give more individual attention to students. In order to do that, the School Council decided to reduce administration and counselling times. This resulted in the administrators and counsellors undertaking some teaching. During the budget preparation time, the School Council also serves as the budget committee to formulate the budget proposal.

General Description of "Lighthouse"

This section contains a general description of "Lighthouse" under the headings of staff, budget, student enrolment, control and programs.

Staff. The school has a staff of forty-two teachers (including ten department heads), two guidance officers, one business manager, one library assistant, one laboratory assistant, and nine secretaries. Most of the teachers are aged over forty and have been with "Lighthouse" for more than ten years. This study includes the interviews with the former principal, the present principal, the two assistant principals, nine department heads, one guidance officer, the business manager, the library assistant, the laboratory assistant and twenty-eight teachers. This accounts for 73% of the total staff at "Lighthouse". The turnover of staff since 1979 is considered to be high, particularly during the years 1982 to 1985. The details are as follows:
<table>
<thead>
<tr>
<th>Year</th>
<th>No of Staff (In)</th>
<th>No of Staff (Out)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1979-80 to 1981-82</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td>1982-83 to 1984-85</td>
<td>19</td>
<td>43</td>
</tr>
<tr>
<td>1985-86 to 1987-88</td>
<td>7</td>
<td>2</td>
</tr>
</tbody>
</table>

**Budget and Student Enrolment.** The changes in budget allocation over the last few years are minimal. The school operated with an annual budget of $2.77 million in 1986-87 for a school population of 1,011 students. This breaks down to $2,774 per student. The teaching salaries accounted for 90 percent of the budget in 1986-87. Like most schools, "Lighthouse" suffered its vicissitudes. In 1986-87, the school admitted 1,011 students, a drop of thirty percent (30%) compared with the enrolment of 1980-81. The enrolment pattern of the last few years is given below. The changes in cost per student are also indicated based on the budget allocations over the last few years.

<table>
<thead>
<tr>
<th>Year</th>
<th>Student Enrolment</th>
<th>Budget ($)</th>
<th>Cost Per Student ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980/81</td>
<td>1452</td>
<td>2,623,912</td>
<td>1,807</td>
</tr>
<tr>
<td>1981/82</td>
<td>1334</td>
<td>2,765,558</td>
<td>2,073</td>
</tr>
<tr>
<td>1982/83</td>
<td>1226</td>
<td>2,922,761</td>
<td>2,384</td>
</tr>
<tr>
<td>1983/84</td>
<td>1173</td>
<td>2,691,825</td>
<td>2,295</td>
</tr>
<tr>
<td>1984/85</td>
<td>1028</td>
<td>2,412,186</td>
<td>2,346</td>
</tr>
<tr>
<td>1985/86</td>
<td>1021</td>
<td>2,431,440</td>
<td>2,381</td>
</tr>
<tr>
<td>1986/87</td>
<td>1011</td>
<td>2,774,387</td>
<td>2,744</td>
</tr>
<tr>
<td>1987/88</td>
<td>1034</td>
<td>2,723,099</td>
<td>2,634</td>
</tr>
</tbody>
</table>
Control. "Lighthouse" involves students in setting the rules for behavior in the school and on the playground, and in settling disputes. It believes that having students participate in these activities encourages them to act responsibly as they become aware of the expectations. "Lighthouse" also rewards students for good behavior, recognizing that positive reinforcement of desirable behavior is often more effective than punishment for poor behavior.

Students at "Lighthouse" are assigned to the two assistant principals who act as their advisors on attendance, discipline, and scheduling. The assistant principals are also available to parents for discussion related to all aspects of their child's school activities.

Regular class attendance is considered extremely important because of the amount of work covered in class periods and because of the great stress placed upon class discussions and group projects as part of co-operative learning. Students are urged to attend classes regularly and those who have poor attendance records may be asked to withdraw from school ("Lighthouse" Composite High School Handbook, 1987-88: 5).

Programs. "Lighthouse" School has traditionally been an academically-oriented school with well-recognized and popular programs in business education and fine arts. There is also a
modern technical arts department. The physical education and extra-curricular activities are strong in both the number of participants and the quality of performance. "Lighthouse" maintains a policy of providing a well-balanced program of studies which includes a healthy mix of sports and work at school.

Each subject in "Lighthouse" has a credit value based on the guideline that one credit is equal to 25 hours of instruction time. The "Lighthouse" timetable is constructed to ensure a minimum of 125 hours for a 5-credit subject and 75 hours for a 3-credit subject. The total credit value of all subjects that may be taken by a student in any year is approximately 40.

All students graduating from "Lighthouse" receive a high school diploma upon completion of courses totalling at least 100 credits, including a minimum of 15 credits in English, 10 credits in Social Studies/Social Science options, 2 credits in Physical Education, 5 credits in Mathematics, 3 credits in Science, and 15 credits in Grade 12 courses including English 30 or 33.

The requirements for the advanced diploma include all of those requirements as well as successful completion of the following provincial examination subjects: English 30, Social Studies 30, Mathematics 30 and at least one of Biology 30, Chemistry 30, or Physics 30.
The strong traditions of academic and co-curricular excellence in "Lighthouse" are illustrated in the following achievements:

- fifteen Rhodes scholars, including the first female Rhodes scholar from Alberta;
- a total of 375 students received Heritage Trust Fund scholarships in the first six years they were offered;
- "Lighthouse" students frequently attain top or near-top averages on provincial diploma examinations;
- approximately 70% of "Lighthouse" students continue into post-secondary education;
- fifteen consecutive years as city champions in track and field and twelve consecutive years as city champions in cross-country;
- numerous city and provincial championships in other inter-scholastic sports.

Approximately one-third of "Lighthouse" graduates go on to university, one-third proceed to another post-secondary institution, and one-third enter directly into the work force. The number of graduates of "Lighthouse" in 1986-87 who were admitted to university and higher institutions was 15% higher than the number of graduates from other senior high schools in Edmonton.
School-Site Decision-Making Project: Initial Stage

Most teachers recalled that in the past, principals, having little say in district policy, were chosen and rewarded for modelling the superintendent's authority and concern for stability within their school while not challenging it in the district. They were not encouraged to innovate or emphasize unique programs. When the concept of SSDM was first introduced in Edmonton public schools in 1979, teachers basically welcomed the innovation. A few of them shared the view that there was a divergence among schools in terms of student needs, the expectations of parents, the desires of communities, the talents of staff, and the style of administration. This divergence in needs and desires was coupled with looming financial restraints that made it imperative for priorities to be established in the application of educational resources. The teachers also agreed that such priorities should be set by the school itself.

Most teachers also indicated that they witnessed growing involvement in the life of the school, particularly from the Home and School Association. Two parents became representatives in the School Council not long after the implementation of SSDM.

Teachers agreed that it was not logical for the central office to determine the use of resources at the school level. They recalled that certain kinds of materials and equipment were often
delivered to the school whether they were needed or not, allegedly in the interests of standardization. SSDM enabled more effective use and better control of resources at the school level.

There was, however, apprehension about the value and flexibility of teachers' involvement in deciding the budget allocation, since staff salaries constituted almost 90% of the budget fund. Some perceived it as a waste of teachers' efforts to "fight over" only 10% of the budget fund, taking into account the time involved in formulating the budget. On the one hand, some teachers saw the process as a hindrance, as something they had to do for the central office and which would have little consequence for themselves. Others wanted to reconceptualize it as a process which could benefit the school and their department in particular.

However, teachers recalled that initially the school was provided with a generous allocation. For a period of two or three years (1979 to 1981), every department was given whatever items were requested. The frustration of long waiting periods for needed materials was soon forgotten. In addition, a carpeted staff room which was well-equipped with refrigerator, standard oven and microwave oven was set up for the benefit of the staff.
During the initial years of SSDM, "Lighthouse" operated with 63 teachers for 1,173 students. As the counsellor of the school put it, "There was surely some 'fat' in the school and we were able to put our heads together to look for areas of wastage and to streamline the use of resources." However, since then, the staff strength has been reduced and in the last two years, the school was staffed with 47 teachers for a student population of 1,020.

Some teachers disclosed that principal-teacher relations played a significant part in determining the benefits of SSDM. They preferred principals who permitted them to participate in decision-making. They agreed that there were good reasons for increased teacher involvement. These were (1) increased teacher professionalism, (2) decisions being made close to the level of implementation, and (3) teachers being closer to the learning situation.

Notwithstanding the receptive attitude towards SSDM held by most of the teachers in "Lighthouse", teachers recalled that initially there was very little involvement by them in decision-making. The interviews with teachers revealed that the former principal (1977-86) played a relatively insignificant role in imparting the philosophy of SSDM and in getting the involvement of staff in decision-making. She appeared to be "confined to her office for far too great a proportion of her time."
Indications were that the former principal was not much inclined to seize the initiative either to consider the innovations in education or to exercise influence over policies and procedures. The general feeling of the teachers was that if at all they were consulted, it was only as a formality; some changes which took place then were arbitrary and without basis for teaching needs.

An interview with the former principal of the "Lighthouse" School provided useful information on the initial problems encountered when SSDM was first implemented.

The former principal described the SSDM system as a very conscious move to allocate resources to schools on an equitable basis, "without making them [the schools] jump through centrally imposed hoops to justify getting any money at all."

She thought SSDM would enhance the school's capability for planning and secure greater involvement of staff, students and the community in the budget planning process. However, the problem was that there was not enough time for involvement to take place. Many teachers were also hesitant to become involved because they saw little possibility that their involvement would actually make a difference. Essentially, teachers were satisfied with the traditional system of administrative decision-making and with the decisions arising from it. The former principal commented, "Under certain circumstances, teachers willingly left decisions within the 'zone of acceptance' to administration."
She added that, "SSDM at the time was viewed as a formality or an attempt to create the illusion of teacher involvement." Teachers also feared that involvement in school decision-making was not a pathway to collegial respect. Some teachers indicated to her that SSDM meant greater responsibility, including sharing the blame for bad decisions. It might also result in the "rubber-stamping" of administrative desires.

She confessed that she did not, during the initial period, involve teachers too frequently in decision-making. She explained,

"Teachers felt that time spent participating in one activity was time not spent on some other activities. For them, time devoted to participating in decision-making processes was time not devoted to teaching activities."

According to the former principal, not much dissatisfaction among teachers was noticed at that time. "Teachers got almost everything they asked for." The only complaint then, was on the timing for budget preparation. She said,

"My teachers and I were unhappy with the fact that schools were required to prepare their budgets at the wrong time of the year. The task of preparing a school's budget for the ensuing September had to begin in February. How could a teacher plan in February for the class she would not even meet until September? How could a high school plan its program for next year, 3 months before course registrations have come in? Sometimes we had to re-do the budget totally in September as everything could change radically in September. When this happened, decisions would have to be made so quickly that there was no time for staff involvement."
It appears that this procedure and time frame have not been changed. As the former principal pointed out, "There are too many unknown variables in February for meaningful planning to occur."

Three or four years after SSDM was implemented, the school was faced with a budget restraint and a decline in the student enrolment. Under the circumstances, the teachers and principal had to decide where cuts would be made and who would be declared surplus. Certain categories of staff been particularly hard hit under SSDM. The former principal explained, "When the squeeze is on, schools and principals were more inclined to cut back on library, counselling, or resource room services, in an effort to preserve class sizes and administration time."

The former principal also related some "inside" stories of how the schools in Edmonton handled the "surplus" funds. According to her, after the initiation of SSDM, some of the schools took a very cautious approach and began salting away reserves for major capital purchases. Others jumped in and committed themselves to technological upgrading or other expensive projects, sometimes incurring deficits in the process. As restraint began to take hold and allocation became tighter, the cautious schools were able to draw upon their reserves to maintain programs and operations. The less cautious schools, however, suffered the double "hit" of reduced allocations and outstanding deficits.
The former principal of the "Lighthouse" School retired from the Edmonton Public School Board in mid-1986 after putting in more than 35 years of education service.

Present Situation

Initially there were some teachers who did not see increased participation in decision-making as beneficial. This situation today has changed and teachers are more objective in analysing the strengths and weaknesses of SSDM. Most teachers attested that after the present principal assumed duty, budget discussion was done on a very open basis. Everyone was aware of where funds had been channelled. All staff have since then been invited to participate in decision-making.

The present principal, who was formerly an associate superintendent with the Edmonton Public School Board, assumed the principalship at "Lighthouse" in 1986. With his numerous years of experience with the central office, he has witnessed changes in the Edmonton School District over the last 10 to 15 years.

Philosophy. In explaining the philosophy of SSDM, the present principal stated:
"Principals must be able to utilize the community to provide support for needed changes. They should be skilled in interpreting to the community the policies prescribed by the Board of Education and central administration. It is essential that they be able to mediate differences of opinion concerning educational matters which exist among those in their district. The increasing demand for accountability forces principals to provide to the community relevant information concerning educational progress being made by students."

The role of a principal had clearly expanded over the years. Besides being an instructional leader and manager of the school, the principal is also required to be an effective liaison officer between the school and the community it serves. The present principal said,

"After the implementation of SSDM, efforts were made to encourage students to move out into the community to lend their enthusiasm and concern to all sorts of projects and organizations. Community groups were also encouraged to participate in the activities of the school, either by giving their time or by using school facilities for community events."

**Teacher Participation.** The present principal indicated that all teachers were expected to be involved in a variety of activities. For example, it was made clear to all teachers that they were expected to help in extra-curricular activities. This requirement was also made clear to newcomers during job interviews. If this requirement troubled the interviewee, he or she was advised
immediately to look for another school. The present principal emphasized that the other teachers would resent someone who did not share the load, and they would find means of expressing this resentment. He commented, "We believe our vigorous extra-curricular program is one of the key reasons our school is such a desirable place for students."

School Spirit. In "Lighthouse" today, it is as important for information to flow downwards as it is upwards. Individual memos, periodic staff bulletins, manuals, rules, procedural outlines and current bulletin boards are among the means used. Information flow between the school and the home is also perceived to be important. This includes handbooks for students and parents, report cards, periodic newsletters to parents, regular parent/teacher meetings, bulletin boards, and diverse activities that bring parents into the building during school hours.

The principal and staff at "Lighthouse" regard school spirit as an important element for cohesion, and they succeed in fostering it. The school uses mottos, school symbols, school songs, and other devices to heighten the students' and teachers' sense of collective identification with their school. The athletic activities of the school and other efforts of the students and staff that symbolize effectiveness, such as the proportion of the students who win scholarships, are well publicized.
Parents and Community Involvement. The Home and School Association is involved in all aspects of the school operation. "Lighthouse" also actively pursues total community involvement in the school's activities. The determination to secure such involvement was stated in the School Handbook as follows:

"Our Home and School Association is a vital part of the school. This close co-operation between home and school enhances the student ability to take advantage of the educational opportunities available at school. The school is inviting more involvement and input in such matters as determining the direction the school should take, budget preparation, liaison with other community agencies and organizations, and assistance with student, staff and parent activities." (1987:23)

Student Achievement. As stated earlier, "Lighthouse" has always been able to obtain high academic achievement. When asked whether SSDM had improved student achievement, the teachers interviewed stated that there might be some correlation between SSDM and student achievement or teacher's job satisfaction but there was no empirical evidence to prove it. They recognized, however, the impact of SSDM on raising the quality of education through (1) better quality of materials; (2) faster speed in getting materials and equipment; and (3) improved efficiency in meeting student needs. The assertion that the "school was in a better position to deploy resources in achieving its goal" was recounted by the teachers. On the subject of student achievement, the principal commented that there was no systematic study which examines the
effects of school-based budgeting on learning outcomes for students. There was, however, information collected by the central office on the Alberta Education Achievement Tests and the Canadian Tests of Basic Skills. The differences between district averages and the provincial averages for these examinations appear to indicate that the Edmonton School District achieves more favourable results on the whole. The present principal added, "Under SSDM, the school could move the resources around to respond more sensitively and quickly to the needs of its students. This should have a positive impact on their learning outcomes." One example quoted was the recent decision to place more emphasis on the problems and needs of students from the lower academic achievement group. In another case, the school decided to monitor more closely the attendance of students and to contact parents promptly should any student be found absent from classes. Following this decision, an amount of $20,000 was expended to install telephones in all classrooms in order to facilitate contacts with parents.

Autonomy. The degree of autonomy teachers enjoy at "Lighthouse" is reflected in the fact that teachers develop their own courses, create units within courses, and make decisions regarding texts and supplemental materials. These activities are in striking contrast to many other districts where texts, curriculum guides, measures of student performance, and even the pacing of courses are the product of district-wide regulations or policies.
However, some teachers claimed that schools in Edmonton did not really enjoy very much autonomy. One example referred to was that in early 1987, a mandate was issued by the central office prohibiting smoking in schools, effective from a specified date. They felt that this was too abrupt. It caused many teachers who smoke to become disgruntled. They thought that the central office should have advised schools to discuss a suitable policy and to propose how best to implement a non-smoking policy. Some teachers also felt threatened by the principal's decision-making autonomy over "hiring and firing." They perceived that this authority could be abused.

**Major Outcomes Of SSDM In "Lighthouse"**

The principal asserted that people would be prepared to live with a decision if they had a part in making it. Decisions affecting the activities at school would be far better made at school. He cited a few important decisions more collectively at the school level and commented that these decisions could not have been made if the school had still been under the centralized system. These decisions which have brought about very positive outcomes are illustrated below.
Reduction in Class Size. In 1987, the school decided to reduce class size to facilitate individual attention to students. The principal, as well as his two assistants, had to undertake some teaching hours. The consequence of this was the provision of two additional teachers for a smaller class size but a slight increase in administrative workload for the department heads. The principal observed that this decision was working out very well. It reinforced the belief that SSDM had made it possible for schools to respond to the needs of their students in many different ways. As stated in "Meeting the Needs of Students".

"Some schools have chosen to operate with smaller classes by having teachers teach for 1400 minutes per week. Others have chosen to reduce the amount of instructional time by organizing with correspondingly larger classes." (Edmonton Public Schools Staff Bulletin, Feb 26, 1982).

Savings on Utilities. "Lighthouse" managed to save $26,000 in 1987 on utility consumption through a joint decision and effort. The funds from energy savings were used to enhance the school's educational activities.

Enhancement in Computer Skills. Courses on computer skills were offered in "Lighthouse." These included the Computing Science Program in the Business Education Department and an Electronics Program featuring work on computers. "Lighthouse" stressed the need for all students to develop basic computer skills, skills that would support their career plans or provide a suitable background for
post-secondary study. "Lighthouse" subsequently decided that students should be offered the opportunity to experience the world of computers in fully equipped microcomputer labs. Resources were therefore made available to set up three labs with IBM PC and Apple computers. The plan was realized over the last two years.

**Comprehensive Textbook Rental and Instructional Materials Fee Plan.** This unique plan has been implemented at "Lighthouse" for a few years. Under the plan, a single fee ($42 at the point of study) provides a student with access to a wide range of textbooks. This substantially reduces the overall cost of expendable school supplies to the individual student. This arrangement might not be feasible under centralized school management.

**Library Media Centre.** Another unique feature of "Lighthouse" was the setting-up of the library media centre (LMC). The principal and teachers in "Lighthouse" shared the same vision that a well-equipped library and media centre would bring about better quality of education. Resources and efforts have since been devoted to this area. The centre is most effectively used by individuals or small groups pursuing assignments or projects created by their teachers or following their own interests. There are two special roles in the LMC's program: (1) instruction in the development of research skills is given both formally (specific classes dealing with the use of specialized handbooks, dictionaries, almanacs,
encyclopedias, periodical indexes, and pamphlets files), and informally; (2) the individual remedial specialist student can use slide/tape, film, or video cassettes learning kits that deal with aspects such as the structure of the biological science or the improvement of writing skills.

**Academic Challenge Program (ACP).** This program is designed for academically high achieving students who wish to engage in a vigorous academic program of studies. At the high school level, the ACP courses are scheduled as a group of fine academic subjects at the grades 10, 11 and 12 levels and are integrated with elective courses designated to expand students' interests. The ACP courses are offered at an accelerated pace, and in greater depth. Formal instruction in logic, research skills, divergent thinking, questioning, and problem-solving techniques form part of the program. A matrix developed by Edmonton Public School consultants for testing talented students is employed to identify students with exceptional academic ability. This matrix consists of the measurement of (a) intellectual ability, (b) academic achievement, and (c) teacher rating of aspects such as perserverance, creativity, commitment, and self-motivation. The principal and teachers at "Lighthouse" share the philosophy that each student is an individual and there is a need to vary teaching to suit individual student needs. They agree that it is their educational responsibility to launch the ACP program. The ACP program, which was designed to
provide an enriched learning experience for academically talented students, was first offered in 1987-88 and has since received very positive support from parents and students.

These examples demonstrate that resources can be more creatively deployed under SSDM to achieve the goals and needs of the school.

The principal of "Lighthouse" expressed the hope that teachers who were under the SSDM system would take advantage of their greater degree of autonomy in the organization for instruction and make that autonomy even more significant.
This research study investigated the nature, objectives, adoption, operation and perceived outcomes of SSDM in two Edmonton public schools. This chapter attempts to address each of the questions to which this study sought answers. These are as follows:

(1) Is there any evidence that SSDM has promoted
   (a) leadership development;
   (b) greater participation in the decision-making process at a lower level;
   (c) an increased sense of responsibility?

(2) What evidence is there, if any, that SSDM has been a contributing factor for the following expected outcomes:
   (a) raising the achievement levels of students;
   (b) retaining students in school for longer periods of time;
   (c) increasing the speed with which decisions can be made concerning local issues;
   (d) increasing administration efficiency and productivity;
(e) keeping unit costs of education within budget guidelines?

(3) Has SSDM enhanced the educational leadership role of the school principals?

(4) What do principals and teachers see as negative aspects of SSDM? Are the gains of SSDM worth the costs (i.e., are the costs of SSDM balanced by enhanced effectiveness/efficiencies/satisfaction)?

(5) In what ways have SSDM procedures aided or hindered the process of service/cost reductions which became necessary as a result of reduced funding to Edmonton schools?

For the purpose of data analysis, these research questions are grouped under the following issues:

(1) Has SSDM promoted leadership development and greater teacher involvement?

(2) Has SSDM contributed to a higher student achievement or to retaining students for a longer period of time? Has SSDM increased satisfaction levels among principals, teachers, students and their parents? Has SSDM brought about administrative efficiency?

(3) What are the perceived costs and benefits of SSDM? Do they balance each other?
The findings from this study are discussed with reference to a number of other research findings related to SSDM. They are organized under the headings of (1) leadership challenge and development, (2) expected outcomes in achievement, satisfaction and efficiency, and (3) costs and benefits: an analysis.

LEADERSHIP CHALLENGE AND DEVELOPMENT

With the decentralization of budgeting and decision-making power to the school level, principals have become more visible and accountable to the central office and their local community. Their role has become more difficult than it was formerly; at the same time, a vast body of learned opinion attests to the cruciality of principals in developing effective schools. From the interviews with the two associate superintendents in charge of Strathearn and "Lighthouse" and the respective principals, it was gathered that the role of principals could be divided into two broad categories of expectations: one group may be regarded as professional and the other, administrative.
Professional Expectations

On the professional aspect, principals were expected to be educational leaders who would act as catalysts in improving both curriculum and pedagogical techniques. Teachers also expected principals to function as providers of resources needed for teaching and of conditions required for satisfactory learning, such as cleanliness, proper heating and adequate lighting.

Principals were also expected to encourage the involvement of teachers in decision-making, to gain the commitment of others to the SSDM philosophy, and to function as change agents. In this latter aspect, principals were expected to deal effectively with resistance to change.

Under SSDM, it was also important for principals to establish conditions which would improve the morale of both their students and teachers. Principals had to be sensitive to shifts in community expectations. They were expected to possess sufficient interpersonal skills to be able to communicate with community representatives and parents and to jointly resolve any difficulties that arose.
Administrative Expectations

From an administrative point of view, principals were expected to be plant managers as well as financial or business managers. They were expected to operate the plant efficiently, to supervise non-instructional staff (janitors, secretaries, and aides) and to deal with their selection, evaluation, and dismissal. In their role as business managers, they had to supply information and make periodical reports to the central office. They also had to control the expenditure of all school funds. Thus, financial management skills were expected of principals in handling a multitude of financial transactions.

Leadership Challenge and Development

The expectations of principals can be simply stated but they cannot so simply performed. The principals now must work with new values, a higher number of decision makers, and an enlarged set of management decisions and responsibilities. They are no longer able to see themselves as the figure supported, and at times protected, by central office rules and regulations. Instead, they must be a coordinator of a number of people representing different interest groups among the school community, who together determine the direction the school is to take. Principals now become relocated from the apex of their small pyramids to the center of a network of human relationships; they function as change agents and resources to their staff (Caldwell, 1980). The expanded role for principals,
together with the resistance of teachers to change and the involvement of teachers in decision-making, constituted a great challenge to the principal's leadership and promoted leadership development. It was observed in this study that three of the four principals interviewed seemed to have been capable of meeting the challenge well with acceptable leadership styles. (It will be recalled that the fourth principal asked to relinquish his principalship.)

Expanded Roles for Principals. The impact of the decentralization policy is perhaps most clearly seen in the new conception of the principalships in Edmonton. The principal's role has become even more complicated and difficult under SSDM, as a principal is expected to be not only an instructional leader but also a business manager. The difficulty for the principal in balancing the two expected roles is not new. It has "long been a source of contention among researchers and practitioners alike" (Smyth, 1980).

Musella (1982) did not refer to the principal's role as manager. He argued that "the principal is an instructional leader—one whose performance is assertive and achievement-oriented." School success is discussed in terms of the leadership of the principal whose first objective is to improve student achievement by improving instruction and the quality of teaching (McCurdy, 1983).
Instructional leadership is perceived by both writers as a key component.

Most teachers in this study expressed concern that their principals seemed to perform a bigger role as school manager rather than as an instructional leader. The principals' time and energy were devoted more to day-to-day administrative tasks, with most activities centering around financial matters. Teachers were concerned that these administrative tasks were undertaken at the expense of the principals' instructional leadership time. Teachers frequently remarked that "principals were hard pressed for time in meeting the deadlines set for budget proposals and school priorities." An example of what teachers said included: "What we discussed at the staff meeting were mainly financial matters. We spent a great length of time on how and where to cut down expenses in order to have sufficient funding for a new program."

Teachers from Strathearn seemed to have a greater concern over the fact that their principals did not devote adequate time to instructional issues. Unlike their counterparts from "Lighthouse" who had department heads, Strathearn teachers worked directly with their principal. They had no head of department to consult on instructional matters. While teachers of "Lighthouse" desired to have a more collegial educational leader, their department heads could, in fact, exercise leadership in their own instructional areas.
An expanded role usually generates more stress. Three of the four principals interviewed described in detail the challenges, difficulties and stress that came along with the changing nature of their roles. The former principal of "Lighthouse", for example, commented, "The role of principal had become far too difficult. We were expected to be 'Jack of all trades'. We felt very stressful most of the time. In my case, I had to stay back late in school frequently in order to finish my work."

Moreover, these principals felt that the managerial responsibilities given - to oversee budgeting, maintenance, caretaking and to interact more with the community - had preempted time from their work as a principal teacher. They stated that it was not possible to have enough time to perform both aspects of their role equally well. The present principal (1985 to-date) of Strathearn stated, "I am fully aware that my teachers wish to spend more time with me on instructional issues. I believe one day when I am more familiar and efficient with my administrative work, I will be able to have more time on curriculum matters."

The present principal of "Lighthouse" did not share the same concern. He had department heads who could perform this leadership function. As one of the larger schools in Edmonton, "Lighthouse" offered a broader curriculum and encompassed a wider array of
goals. The present principal seemed to believe that the instructional management role had to be enacted by department heads. This is similar to the point of view held by Jones (1988: 6):

"The departmental organization common to most secondary schools further removes principals from instructional programs... . Given the average number of teachers in a secondary school faculty, it is unlikely that principals are able to devote much time to this endeavour [in improving instructional practices]."

Resistance to Change. Resistance to change is invariably identified in literature as the critical problem of the change process. Boyd and Crowson (1981) began their recent state-of-the-art review by noting that "public schools have become notorious for their ability to resist change and innovation." It is suggested that schools have a refractory character - that their organizational nature makes them innately resistant to change (Hurn, 1978).

This study revealed similar findings at both the senior high school and the community school. Teachers, particularly at Strathearn school, resisted change during the initial stage, and perceived that SSDM was launched with considerable haste, leaving them uncertain about their role in the change. Moreover, the advantages of decentralization were at no time communicated to teachers in sufficient detail to enable them to understand fully and accept the new system. Teachers felt comfortable with the old
system, though they often experienced frustration in waiting for teaching equipment and materials for their programs. Thus, teachers experienced fear and anxiety about the "unknown." This finding agrees with Bartlett and Kayser (1973: 375) who related role ambiguity to resistance in observing that "people - alone or in groups - do not resist change per se. What they resist is the uncertainty conjured up by change." Teachers also realized that their principals were not prepared adequately for the change. "It was like the blind leading the blind." This was a typical quote from many teachers.

Teachers at "Lighthouse" appeared to have fewer complaints about the early period. This could be due to the fact that the allocation of funds to their school was seen as generous. The frustration of long waiting periods for needed materials was removed. Most teachers at "Lighthouse" supported the underlying belief of SSDM that it was not logical for the central office to determine the resource needs of each school. They believed that decisions should be made by those who were to be affected by those decisions. However, teachers were skeptical about the value of their involvement in deciding the budget allocation. For example, a few teachers held the belief that since staff salaries constituted almost ninety percent of the budget fund, very little was available for discretionary use.
In conclusion, there were no overt acts of resistance. For example, no teacher refused to be involved or attend meetings. There was no boycott. In general, teachers went along with the new system even though they grumbled much of the time.

It should be noted that the second principal of Strathearn was most uncomfortable with the change. He felt pressured to involve teachers in decision-making before they were really ready to do so. He also resented being made accountable for "productivity" when he had not had the opportunity to select teachers and pupils during the initial period.

Teacher Involvement in Decision-Making and Principal's Leadership Styles. In educational organizations, evidence has been found of a strong desire by teachers to achieve greater control over decision-making (March, 1981). Some researchers, like Alutto and Belasco (1972), Knoop and O'Reilly (1976) and Crockenburg and Clark (1979) have warned, however, that the desire to participate is not universal and the areas of desired participation are confined in some instances to instructional issues.

Alutto and Belasco specified three levels of participation: deprivation (participating less than desired), equilibrium (participating as much as desired), and saturation (participating more than desired).
This study revealed that there was no evidence of decisional deprivation at either of the schools. While teachers were not left out of the decision-making process, they most certainly did not welcome too much participation. This was evident from their complaints that too much time was devoted to participation in decision-making. They were also concerned that SSDM had diverted human resources from the main purpose of the school - the teaching/learning process - to administration. However, a few teachers at "Lighthouse" expressed their desire to have more participation than they now enjoyed. Five out of seven of these teachers were not involved in any of the school standing committees. This probably explains why they had such desires.

The findings reported above agree with what was found in the study of Alutto and Belasco who wrote:

"It is probably more reasonable to assume that not all segments of the school population will be equally desirous of increased participation in organizational decision-making. Rather, some teachers may desire more participation than they now enjoy, others may desire less, and still others may desire neither more or less" (1972: 28).

Teachers initially were most concerned with those areas which were distinctly instructional rather than administrative. They became more involved with budgetary decision-making when they discovered the relationship between the budget and what was possible for them to do in their classrooms.
It was noted that teachers from Strathearn tended somewhat to experience "decisional saturation." Probably owing to a smaller school size, teachers inevitably became involved in every aspect of the school's decisions. A study by Conway (1986) pointed out that teachers' participation in decision-making can be overdone and frequent decisional saturation tended to increase teacher dissatisfaction. The "decisional saturation" situation in Strathearn, however, was not frequent enough to cause any dissatisfaction.

There was no significant difference between the male and female teachers with respect to their desires to participate. This is different from the study of Alutto and Belasco who found that only a small proportion of teachers - typically young, male and ambitious - had desires to participate actively in decision-making. Many wished simply to teach and study and preferred to leave administration to others.

Teachers' involvement in decision-making is a complex phenomenon. Involvement itself can range from the mere presentation of an opinion, where the final authority rests elsewhere, to membership in the group which exercises final control over an issue (Alutto & Belasco, 1972 : 30). The degree of teacher involvement is also significantly associated with the leadership styles of their principals. As Young implied in his study on school-based budgeting
and principals' leadership styles, the degree of subordinates' involvement depends, to a large extent, on the leadership style of the leader. He wrote,

"Occupying a higher position in the hierarchy, the principals had adopted a protective stance toward the teachers, shielding them from some aspects of the budgeting process" (1986: 8).

When SSDM was first implemented, no single method of involving teachers in the decision-making process was recommended by the central office. Principals could choose a consultative or collegial form of decision-making for their schools (Caldwell, 1979).

Basically, a principal has three choices of leadership style (Likert, 1967; Vroom & Yetton, 1973). A principal employing an authoritarian leadership style makes unilateral decisions with only an occasional effort to seek teachers' opinions and ideas. Under a consultative leadership style, the principal consults with teachers but ordinarily makes the decisions himself. A principal employing a group leadership style involves teachers fully in all decisions related to their work.

Three out of the four principals in this study appeared to have employed a consultative leadership style. In other words, they were responsible for making the final decisions, although their teachers were consulted with and were involved in decision-making processes. The present principal of Strathearn, however, was the
only principal whose style appeared to lie at the group end of a consultative-group continuum in leadership style. Besides her own personal belief, a relatively smaller staff strength in the school was probably the reason for her being more inclined to a group leadership style.

A similar finding was reported by Young who found that most principals "were using a predominantly consultative leadership style. In other words, the principals sought input from the teachers but reserved for themselves the right to make decisions regarding the educational programs of their schools and the allocation of funds to these programs." Young further commented that,

"... it is evident that school-based budgeting can be implemented with the principal's use of a consultative leadership style. This is what appears to be happening at present. However, the full potential of school-based budgeting is more likely to be realized through a leadership style which allows greater collaboration among principals and teachers" (1986:7).

The present principal of "Lighthouse" explained, "If I involve my teachers in everything and don't make my own decisions, it may create an impression that I do not know my job and I cannot make the decisions that I am paid to do." He explained further that he did not have doubts about the ability of teachers to make wise
program decisions, but the teachers themselves gave no indication of desiring a role greater than that of providing input for the principal's decision-making.

One interesting finding was the "adaptable" leadership style employed by the second principal (1980-85) of Strathearn and the first principal (up to 1985) of "Lighthouse". They reported that during the initial periods, they adopted a more authoritarian leadership style as they perceived that the teachers were not interested in spending too much time and effort on management decisions. As time progressed, teachers became more appreciative of the objectives of SSDM and were more receptive to participative decision-making. These factors suggested the wisdom of shifting from an authoritarian to a consultative leadership style.

EXPECTED OUTCOMES IN ACHIEVEMENT, SATISFACTION AND EFFICIENCY

The expectations of SSDM as held by the school district were indicated in a policy handbook (1979) and the various manuals for school budgeting and accounting. A few illustrative expectations are given below:
(1) To cut down waste of resources through more effective planning at school level as decisions should be far better when made at school than elsewhere;

(2) To bring about better control of resources;

(3) To shift the emphasis from "how much money had been spent" to "how much money should be spent", taking into account the scarce resources available. The resources available should be directed to meet the perceived needs;

(4) To bring about a change in management style from authoritarian management to participative management;

(5) To bring about accountability through participatory decision-making because people feel accountable and responsible for decisions made with their involvement; and

(6) To bring about more educational innovations with the involvement of teachers, parents and students.

The expected outcomes of SSDM as reported in current literature include (1) higher student achievement (Crockenberg & Clark, 1979; Caldwell & Spinks, 1988); (2) greater flexibility in school management (Caldwell, 1977 and Seward, 1975); (3) more
opportunities for innovation (Mintzberg, 1983; Moch & Morse, 1977); (4) increasing principals' and teachers' job satisfaction (Steers, 1977 and Holdaway, 1987).

The actual outcomes of SSDM are discussed below to examine if they are congruent with the original expectations for SSDM. The discussions are organized under the headings of (1) student achievement; (2) student retention level; (3) curriculum flexibility and innovation; (4) satisfaction level; and (5) administrative efficiency.

**Student Achievement**

The impact of SSDM on the learning outcome of Edmonton students could not be ascertained since no information on student results was collected before SSDM to enable a comparative study to be made. This finding was also reported by Brown:

"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" (1987 : 27).

When asked whether SSDM had improved student achievement, the teachers at the two schools studied stated that there might be some correlation between SSDM and student achievement; but there was no empirical evidence to prove it. However, the quality of education was perceived to be higher since there was (1) provision of better
materials; (2) expediency in obtaining materials and equipment; and (3) a better match between programs and student needs. This perception is similar to that of Caldwell and Spinks who commented that SSDM with "budgeting as well as educational planning may enhance the quality of teaching and learning" (1988: 223).

It is noted that research studies on the link between SSDM and student achievement seem to have provided mixed results. Crockenberg and Clark (1979) found that student achievement was positively correlated with teacher participation in decision-making. Conway (1984) argued that under SSDM, students' "attitudes toward school may be more positive, but test performance does not appear to be affected." Strathearn and "Lighthouse" teachers, however, attested that students' involvement in school matters such as student discipline, time-table scheduling, budgeting and curriculum had not only reduced their feeling of alienation but also brought about a positive effect on their learning.

In order to have a better picture of the student achievement level, the Edmonton district has initiated comparative studies of student results with regard to the following exams/tests:

(1) International Baccalaureate examinations (comparing district and world averages);
(2) Alberta Education Achievement Tests (comparing district and provincial averages); and
Alberta Education Diploma Examination (comparing district and provincial averages).

In the 1986 series, the district average on the International Baccalaureate examinations was higher than the world average for all seven courses. With the exception of History and Biology in 1984, the district average has been higher than the world average for all subjects tested over the last three-year period.

The 1987 Alberta Education Achievement Tests in grade 3 Science, grade 6 Mathematics, and grade 9 Social Studies were administered to students across the province. The averages obtained by district students were significantly below the provincial averages for grade 3 Science and grade 9 Social Studies, and not significantly different from the provincial average for grade 6 Mathematics. A further analysis of results showed that the averages obtained by district students in these subjects were significantly higher than the provincial averages in 1983, 1984 and 1985. The drop in results occurred only after 1986.

The Alberta Education grade 12 diploma examinations were administered to students who had completed the diploma examination courses. In the 1988 administration, the district average was lower than the provincial average (by 0.5 per cent to 1.5 per cent) for all courses except English 33 (0.2 per cent higher) and Physics 30.
(1.0 per cent higher). The district average has been higher than the provincial average over the last 4 years (1984-87) in Social Studies 30, Mathematics 30, Biology 30 and Physics 30.

A general summation of these results has been provided to the principals. It is noted that starting from 1986, the results of the Alberta Education Achievement Tests and the Alberta Education Diploma Examination have registered a drop. Plans have been formulated by the district to further enhance student achievement.

It should be pointed out that except for the principals, the teachers appeared to be unaware of the existence of the comparative results as none of them was able to cite the findings of these results when commenting on the impact of SSDM on student achievement. There appears a need to keep teachers informed of such important information.

The students of the two schools studied were found to be achieving excellent results. In 1987, Strathearn students at the year 6 level performed extremely well, with 83 percent meeting the grade 6 benchmark for the system in Language Arts, and 73 percent meeting the benchmark in Social Studies. Seventy percent of the students met the grade 9 benchmark for Language Arts and 72 percent met the benchmark in Science. "Lighthouse" especially is noted for
its academic excellence with its students attaining top or near-top averages on provincial diploma examinations every year.

Based on the findings described above, it is not possible to conclude a relationship between SSDM and student achievement in this study. Although the teachers and principals claim that a better quality of education has been provided by the Edmonton district schools, there is no evidence to support such a contention.

One senior administrator at the Edmonton central office held the view that since the "output change" is an important indicator for measuring the effects of SSDM, it is desirable to "build a mechanism to measure learning changes before and after SSDM." Districts that have plans to implement SSDM should take into account this requirement.

**Student Retention Level**

One of the specific questions addressed in this study was to establish if SSDM was a contributing factor for retaining students in school for longer periods of time. This, however, was not stated as one of the district's expected outcomes.
The two schools in this study faced a sharp decline in enrolment over the last few years, due mainly to a high transciency rate of families, and in the case of "Lighthouse," a rapid development of the town.

The overall student enrolment in Strathearn dropped from 385 in 1980-81 to 222 in 1987-88. The enrolment in "Lighthouse" stabilized at 1000 for the last four years, but the school used to register 1500 students.

It should be noted that an open boundary system was also implemented in the district alongside with SSDM. Students in the district are free to choose the school they wish to attend, without any boundary restriction. As a result, schools have to compete for students since a higher enrolment would result in a higher budget allocation. Various promotional strategies have been adopted by the two schools to secure more students and to retain existing students in the school.

With the given circumstances, the relation between SSDM and student retention level could not be established in this study.
Curriculum Flexibility and Innovation

One of the district's objectives of SSDM was to provide schools with greater flexibility in developing their instructional programs. In Brown's (1987) study, one respondent felt that decentralization had a general catalytic effect and infused new ideas into the school. This was evident from the innovation of Strathearn and "Lighthouse" in (1) offering programs to better meet the needs of their students and local priorities (eg academic challenge and extended French programs); (2) deciding the required texts and supplemental materials at school level; (3) providing special facilities to enhance learning outcome; (4) reducing class size to facilitate individual attention; and (5) hiring additional personnel to achieve a desirable teacher-student ratio. The evidence indicated that SSDM had provided opportunities and flexibility for schools to be more innovative in program planning. Schools were able to make and carry out decisions which might not have been possible under more centralized management.

This finding supports the studies of Seward (1975) and Moch and Morse (1977). Seward (1975), after comparing centralized and decentralized budeting in two similar school districts in California, concluded that there was significantly greater expenditure diversity within budget categories in the system with school-based budgeting. Moch and Morse (1977) argued that decentralized organizations are more innovative than centralized ones.
One of the unique features found in the Edmonton SSDM system is the flexibility of carrying forward surpluses and deficits for the total school budget. In 1986-87, $2.8 million in surplus funds were carried forward by Edmonton schools. In previous years, the following amounts were carried forward: $3.4 million in 1980-81; $3.4 million in 1981-82; $4.1 million in 1982-83; $3.8 million in 1983-84; $2.1 million in 1984-85; and $390,000 in 1985-86 (Superintendent's Memo No 7, 1987). The Superintendent of Schools indicated that "many of our colleagues from other school districts are surprised that this concept has actually been put into practice."

By allowing schools to carry forward surpluses and deficits, the district enables schools to make more responsible decisions about how and when funds should be spent. Such a system of operation can only work where "there is a good working relationship between the trustees, the administration, and the schools and their communities." The Superintendent of Schools remarked, "This past year has shown us that such a relationship certainly exists within our district. In a time when funds were cut back by the province, our board could easily have decided to 'confiscate' the surplus funds. Our trustees chose not to do this because our schools are managing funds for the most effective service to our students."
School districts which are interested in implementing SSDM may want to consider this unique feature of the Edmonton system.

**Satisfaction Level Among Teachers and Principals**

One of the district's priorities for the last two years has been to enhance staff satisfaction (Edmonton Experience II 1987 : 49). It is generally assumed that innovation will not happen if principals and teachers do not perceive a reasonable level of job satisfaction. Job satisfaction is "the pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating one's values" (Locke, 1969).

**Satisfaction Level Among Teachers.** The feedback on staff satisfaction level is being monitored yearly through an attitude survey which was described in Chapter Two. An analysis of the 1987 staff attitude survey shows that satisfaction among staff has been falling over the last two years. The results are given below.

<table>
<thead>
<tr>
<th>Satisfaction Level</th>
<th>1986 to 1987</th>
<th>1982 to 1987*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased Satisfaction</td>
<td>60%</td>
<td>70%</td>
</tr>
<tr>
<td>No change</td>
<td>13%</td>
<td>11%</td>
</tr>
<tr>
<td>Decreased Satisfaction</td>
<td>27%</td>
<td>19%</td>
</tr>
</tbody>
</table>

(* No survey was administered in 1984.)

Areas of decrease in levels of satisfaction included support from the superintendent of schools and associate superintendents, and fair compensation.
It is regrettable that data on teachers alone are not available as the attitude survey combined both teaching and non-teaching staff (at central office and schools). However, these results represent the input of two-thirds of the teachers'. Thus, it can be assumed that the satisfaction level among teachers has been falling over the last two years. Because it was not possible, for reasons of confidentiality, to study data from the two schools, it is impossible to establish if the decline in the satisfaction level is to be found in these two schools. It is also not possible, using this case-study method, to determine if this decline is a direct result of SSDM.

However, the findings of this study may shed some light on teachers' satisfaction. While none of the teachers interviewed expressed a lot of dissatisfaction, the majority of the teachers did report work-related stress. The main source of stress seemed to come from SSDM itself. SSDM, with the need for many meetings, was perceived to be very time-consuming. The complaints made frequently by teachers were, "Our involvement in meetings is excessive!" and "We seem to be forever entering and leaving the meeting room." Teachers were concerned that because of the time taken up with meetings and participation, they had less time for their students. This result supports the findings of Burke (1981) and Conway (1984). Burke investigated 17 school districts and found no significant relationships among elementary and secondary school
teachers between satisfaction and either formal or informal participation. Conway concluded that one out of three empirical studies did not confirm the relationship between satisfaction and teacher participation in decision-making.

Moreover, the expanded role of teachers to assume more responsibility for "public relations" and extra-curricular activities was considered by most to be very taxing on their energy levels. Teachers felt that too much time and energy was being diverted from their role as professionals to administrative and record-keeping tasks.

It was observed that teachers' perception of job satisfaction could be affected by their frustration in recent years with budget restraint. SSDM was instituted at the time when more funds were available. But since then, the district has experienced a financial cut-back and a decrease in purchasing power. Teachers often complained that their departments "spread themselves too thin." They felt that they were being asked to "make do" with less and less, but at the same time they were being asked to "improve performance." Teachers might have confused their frustration with budget restraint with frustration over the SSDM system.
Despite all these reasons for dissatisfaction, most teachers in this study did derive a lot of satisfaction from their work. In fact, teachers in this study were found to be motivated and enthusiastic in performing their jobs. Teachers from "Lighthouse" were proud of the fact that their school, which was well known for its high academic achievement, had maintained a good reputation over the last 15 years. Several teachers indicated that "Lighthouse" would do just as well without SSDM. "We are motivated and we work hard in order to maintain our school's reputation." Working with students was cited overwhelmingly by the teachers in this study as being the major source of their satisfaction. While this particular response is consistent with the finding of Holdaway's study of job satisfaction of classroom teachers in Alberta (1975-76), it contradicts the study of Alutto and Belasco (1973) who concluded that teachers derived a lot of satisfaction from participation.

It would be informative if there could be a study comparing satisfaction levels of Edmonton teachers with those of teachers in non-SSDM districts.

**Satisfaction Level Among Principals.** Three of the four principals in this study reported a higher level of job satisfaction after the introduction of SSDM. This finding is consistent with that of Alexandruk, who wrote,
"The level of satisfaction among principals is greater than the level of satisfaction among teachers on both the school and district dimensions" (1985: 135).

Similar to the study of Jankovic (1983), principals in this study reported that SSDM, with the new one-line authority structure, had reduced principals' experiences of stress because of reduced ambiguity in the role of the principal and in the relationship between the principal and central office on decision-making. The present principal of Strathearn highlighted the difference in decision-making before and after the one-line authority structure as follows:

"... I remember working as a beginning principal and often calling a neighbouring principal and saying that I have this problem and who do I phone? ... Now, working with one area superintendent ... you know exactly what you can go to him with and he is there within an hour if you need him ..."

The former principal of "Lighthouse" explained that prior to the introduction of the one-line authority structure, she encountered conflicts with central office administrators as a result of the ambiguous relationships between central office and principals.

Other aspects of SSDM that reduced principals' experiences of stress included (1) the removal of many constraints to school-level decision-working; and (2) the increased flexibility in implementing educational initiatives. As a result, the unique needs of the communities could be met.
However, certain aspects of SSDM were identified as contributing to principals' increased experiences of stress. These included (1) the pressure from the central office in meeting important deadlines; (2) the burden of responsibility for the budget, transferred from the central office to principals; and (3) the expanded role of principals.

The expanded role of the principal under SSDM was considered to be the main source of principals' stress. In Jankovic's findings, one of the aspects identified was that SSDM had increased the potential for conflicts between the principals and staff. There was no indication by principals in this study that this conflict was a source of stress.

In their recent research report, Holdaway and Johnson (1987) compared the levels of satisfaction with job facets between principals from the Edmonton Public School District and all other selected principals in Alberta (elementary and junior high schools only). The study found that Edmonton principals reported a much higher level of satisfaction than did their counterparts in other Alberta school districts. Out of 42 job facets identified, Edmonton principals registered a higher satisfaction rating in more than 70% of these facets.
A 6-point scale was employed to assess the degree of satisfaction with each work facet. A frequency analysis of the 42 "Mean Satisfaction Ratings" reveals the following results:

<table>
<thead>
<tr>
<th>Mean Satisfaction Rating (6-point scale)</th>
<th>Edmonton Principals</th>
<th>All Other Alberta Principals</th>
</tr>
</thead>
<tbody>
<tr>
<td>At Elementary Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>up to 4.5</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>up to 5.0</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td>Above 5.0</td>
<td>26</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>42</td>
</tr>
<tr>
<td>At Junior High Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>up to 4.5</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>up to 5.0</td>
<td>14</td>
<td>21</td>
</tr>
<tr>
<td>Above 5.0</td>
<td>23</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>42</td>
</tr>
</tbody>
</table>

Apparently, Edmonton principals reported higher "Mean Satisfaction Ratings" in a greater number of job facets.

Facets of the job which emerged as most satisfying for Edmonton principals included (1) the principal's physical working conditions; (2) authority associated with the principal's position; (3) involvement in hiring teachers for the school; and (4) availability of clerical staff to assist the principal. The details of the "Means Satisfaction Ratings" are provided in Appendices II and III.
Satisfaction Levels Among Students and Parents

Every year, a one-page attitude survey questionnaire is administered to a random sample of students and parents in the Edmonton district. The samples are drawn in a manner that provide reliable results at the individual school level. The survey provides an indication of the levels of satisfaction of the respondents.

Survey of Student Attitude. The survey questionnaires for students contain 37 items for senior high students, 35 for junior high students, and 24 for elementary students. The items questioned are broadly categorized into four areas: (1) school courses and learning; (2) school personnel; (3) discipline, rules and regulations; and (4) school facilities.

As reported in a memorandum of the Superintendent of Schools to the Board of Trustees, there was an overall increase in students' level of satisfaction for the majority of areas covered in the 1987 survey.

The memorandum also reported that students at the elementary level continued to show high stable levels of satisfaction, with concerns being related mostly to behavior and discipline issues. Junior high students exhibited an overall lower level of
satisfaction than elementary and senior high students, although most items showed increases of four to ten per cent over the period 1982-87.

Senior high students expressed a slight decrease in levels of satisfaction for most items over the 1986-87 period. The levels of satisfaction remained generally higher than those expressed by junior high students.

The item analysis is given below:

<table>
<thead>
<tr>
<th>Item Analysis</th>
<th>1986 to 1987</th>
<th>1982 to 1987*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Elementary Students</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased satisfaction</td>
<td>43%</td>
<td>91%</td>
</tr>
<tr>
<td>No change</td>
<td>48%</td>
<td>0%</td>
</tr>
<tr>
<td>Decreased satisfaction</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td><strong>Junior High Students</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased satisfaction</td>
<td>57%</td>
<td>91%</td>
</tr>
<tr>
<td>No change</td>
<td>29%</td>
<td>3%</td>
</tr>
<tr>
<td>Decreased satisfaction</td>
<td>14%</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Senior High Students</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased satisfaction</td>
<td>32%</td>
<td>54%</td>
</tr>
<tr>
<td>No change</td>
<td>16%</td>
<td>8%</td>
</tr>
<tr>
<td>Decreased satisfaction</td>
<td>52%</td>
<td>38%</td>
</tr>
</tbody>
</table>

(* - indicates five-year trend.)

(The five-year (1982-87) trend indicates a progressive increase. No survey was administered in 1984.)
For the elementary students, the areas of increased satisfaction in the 1987 survey included these items: children in the schools follow rules; homework helps students to learn more; and students like being in school. Less satisfied areas included teachers' caring attitude toward students and school's dealing with children who misbehave. The detailed results are presented in Appendix IV.

Fifty-seven percent of the junior high students expressed increased satisfaction in the areas of the number of option courses available; high school and career planning assistance; a say in decisions that affect students; and extra-curricular programs. Areas of decrease included satisfaction with their principal; how discipline was handled in schools; and numbers of students in classes. The detailed results are presented in Appendix V.

Areas where senior high students expressed levels of increased satisfaction included the amount of opportunity for experiencing success in school programs, the number of option courses available, and feelings towards principals and assistant principals. Lower levels of satisfaction were registered in such areas as feelings towards teachers, the office staff and the students' council. Other areas were further education, career planning assistance, and the way student discipline and attendance problems were handled. The detailed results are shown in Appendix VI.
It is regrettable that it was not possible, for reasons of confidentiality, to compare the student satisfaction levels of the two schools with those for the district as a whole. It would have been very informative also to have been able to compare data from 1979 to the present time. For example, have the attitudes of students (of Strathearn and "Lighthouse") toward self, others, school, and education become more positive over this period? Even more useful would be a comparison of the attitudes of students in Edmonton with non-SSDM school systems.

Based on the information provided by the teachers of the schools studied, it was noted that there have been fewer discipline and vandalism problems in these schools. The claim that student discipline would improve if students participate, is supported by the research of Richter and Tjosvold (1980), who demonstrated that children in student participation classes spent more time on task regardless of teacher presence. Conway cited findings by McPartland and McDill (1974) indicating "... less truancy and lower inclination towards vandalism in schools" (1984 : 27).

Survey of Parent Attitude. The survey questionnaires for parents contain 29 items which can be broadly classified into 5 areas: (1) school programs; (2) communication/information; (3) parent involvement; (4) school personnel; and (5) school facilities.
The memorandum of the Superintendent of Schools reported that in 1987, parents showed a progressive increase in levels of satisfaction for most items questioned, but continued attention will be directed to the adequacy of information about the district's programs and accomplishments and the extent of parental involvement in the budget planning process at the school level. The detailed results are reproduced in Appendix VII.

The item analysis is given below:

<table>
<thead>
<tr>
<th>Item Analysis</th>
<th>1986 to 1987</th>
<th>1982 to 1987</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased satisfaction</td>
<td>50%</td>
<td>67%</td>
</tr>
<tr>
<td>No change</td>
<td>25%</td>
<td>21%</td>
</tr>
<tr>
<td>Decreased satisfaction</td>
<td>25%</td>
<td>12%</td>
</tr>
</tbody>
</table>

In Edmonton, parent attitude survey results for individual schools are graded as confidential documents. However, the researcher was given access to the parents' survey results of the two schools studied.

In the case of Strathearn, the parents reported an overall high level of satisfaction in the 1987 survey. Out of 29 areas surveyed, 22 were found to be higher than the district's. The higher percentage differences ranged from 1 percent to 23 percent. Two areas registered slightly lower levels. Areas of satisfaction included communications, courses and programs offered in school, and satisfaction with teachers.
In the case of "Lighthouse", out of 33 areas surveyed, 22 were found to be higher than that of the district's. The higher percentage differences ranged from 1 percent to 10 percent. Areas of satisfaction included involvement with the budgeting process and the handling of student discipline. There were eight areas which were slightly lower.

This study revealed that parents of an SSDM school system do express a high level of satisfaction with the education system. As Mann (1974) asserted, parent participation in educational decision-making increased parents' identification with the school. Proponents of parent participation in educational decision-making, including Solo (1979), Seldin and Maloy (1979), and Herman and Yeh (1983), frequently cite benefit claims associated with parent participation in appreciation of governance complexities, increased support for education, more effective organizations, and improved morale and self-confidence. A comparison of the attitudes of parents in Edmonton with the attitudes of parents in non-SSDM systems may be useful in substantiating these claims.

Administrative Efficiency

Efficiency implies managing the educational resources in such a way as to generate the greatest benefit at a cost which can be readily borne by the public (Alexandru, 1985 : 23).
Much literature contains frequent references to the greater efficiency with respect to the expenditures on education as a result of decentralization.

Alexandruk reported that,

"Other features of school budgeting which were perceived as positive aspects included efficiency and effectiveness in the expenditure of the education dollar" (1985 : 126).

When asked if SSDM was adopted partly because it might reduce costs, a senior administrator from the central office replied that it was not. The present principal of "Lighthouse" also confirmed that cost reduction was never intended to be one of the objectives of SSDM. This was evident from the fact that the number of positions at the central office remained unchanged despite the move to decentralize. Furthermore, all larger schools were provided with a business manager to handle the accounting works, which presumably had been previously done by central office.

Coleman, in his study of four schools in a British Columbia school district, found that,

"Since some might believe that SBDM has the potential for cutting costs, it should be emphasized that in the SBDM schools the change was not toward reduced spending but redirected spending" (1987 : 9).

(The term School-Based Decision-Making [SBDM] was used in Coleman's study.)
The data gathered in Brown's study indicated that the cost per student in Edmonton was the same for the years from 1979 to 1983. This seems to indicate "that efficiency has increased" (1987: 29). Presumably he made such a statement based on the fact that inflation was increasing during the period.

However, the data gathered for this study showed that in the subsequent years (1983 to 1987) the cost per student did escalate. The increase at the district level was marginal. Table One provides details on student enrolment, expenditures and cost per student.

<table>
<thead>
<tr>
<th>TABLE ONE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student Enrolment</strong></td>
</tr>
<tr>
<td><strong>At District Level</strong></td>
</tr>
<tr>
<td>1983-84 69,042</td>
</tr>
<tr>
<td>1984-85 68,905 (no change)</td>
</tr>
<tr>
<td>1985-86 69,750 (+1%)</td>
</tr>
<tr>
<td>1986-87 70,357 (+0.9%)</td>
</tr>
<tr>
<td><strong>At Strathearn Community</strong></td>
</tr>
<tr>
<td>1983-84 331</td>
</tr>
<tr>
<td>1984-85 324 (-2%)</td>
</tr>
<tr>
<td>1985-86 286 (-12%)</td>
</tr>
<tr>
<td>1986-87 257 (-10%)</td>
</tr>
<tr>
<td><strong>At &quot;Lighthouse&quot; Senior High</strong></td>
</tr>
<tr>
<td>1983-84 1,173</td>
</tr>
<tr>
<td>1984-85 1,028 (-12%)</td>
</tr>
<tr>
<td>1985-86 1,021 (-1%)</td>
</tr>
<tr>
<td>1986-87 1,011 (-1%)</td>
</tr>
</tbody>
</table>

**NOTE:** (1) Percentages in parentheses denote the differences between the present and previous years.

(2) District-level costs include the costs of all the individual schools as well as the central office.
The district's and the two schools' costs per pupil are 9%, 30% and 18% higher, respectively, than the figures registered four years ago. Taking into account the 15% increases in Alberta teachers' salaries, it can be concluded that Edmonton district on the whole has achieved administrative efficiency. However, it is difficult to explain the discrepancies between the reduced enrolment figures and expenditure at the two schools studied.

At the schools studied, there seems to be no evidence of increased efficiency in the sense that costs are reduced. The operational definition of efficiency by Thomas cannot apply to these schools as there is no qualitative evidence showing that there is "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" (1980:148). However, several researchers make the point that spending has been somewhat redirected. Moreover, certain basic components critical to the operation of a school, such as personnel and school facilities, cannot be cut down overnight despite the drop in enrolment.

Another way to view efficiency was proposed by Caldwell (1979) who wrote, "Efficiency is concerned with whether effectiveness is being achieved at an acceptable cost." With the limited evidence obtained, it may be concluded that Edmonton district is achieving effectiveness at an acceptable cost. This
conclusion is based on the fact that the district is gaining adequate returns for its investment. Curriculum flexibility, more innovations, high student achievement, and satisfied principals, parents and students are the important returns.

COSTS AND BENEFITS: AN ANALYSIS

From the responses of the teachers and principals in this study, it is evident that involvement in SSDM does offer certain benefits which school districts might view as important goals. However, teachers and principals alike were not hesitant in pointing out the costs - the weaknesses or losses - of SSDM.

Benefits (Gains) of SSDM

The most frequently cited benefits or gains of SSDM of principals and teachers were (1) increased autonomy and ownership; (2) curriculum flexibility; and (3) expediency in securing supplies and equipment.

Principals and teachers perceived SSDM as providing them with a higher level of autonomy to determine which curricular and staff development activities best met the needs of their particular school. In carrying out these functions, they also controlled the
ways in which the financial resources were spent. Besides added confidence in one's ability to control his or her school's resources, SSDM was also perceived by most teachers as having contributed to an individual's feeling of ownership - the notion that one has a stake in the future of an organization. A similar finding was found in the study of Duke, Showers and Imber, where teachers reported "a sense of shared ownership" as one of the three benefits resulting from shared decision-making (1980: 99). The ownership feeling is a distinct benefit because it can combat the destructive forces of anomie and alienation. It should be pointed out that alienation was on no occasion reported by any of the principals or teachers in this study.

Greater curriculum flexibility to plan programs to meet school needs and local priorities and the emergence of new program choices for students (for example, the extended French program at Strathearn and the academic challenge program at "Lighthouse") were seen as positive developments as a result of implementing SSDM.

The benefits of minimizing the amount of "red tape" were realized in the two schools studied, particularly with regard to the procurement of supplies, equipment and services. The bureaucratic procedures that existed in the past were perceived to have caused frustration and ineffectiveness.
Another benefit of SSDM which was reported by only half of the teachers interviewed was that SSDM brought the planning process into focus - assessment of needs was promoted, and conscious decisions about the utilization of resources were forced to meet defined objectives. There was increased awareness of the relationship between educational needs, programs and associated costs.

Both the present principals of "Lighthouse" and Strathearn attested that SSDM provided a framework for professional development as participation in the process enhances the development of skills in assessing needs, goal-setting, policy-making, setting priorities, planning, budgeting, evaluating, decision-making, forming consensus and problem-solving. The present principal of Strathearn believed that her teachers had also improved in these professional skills over the years. Though the claim of professional development seems logical, none of the teachers cited this aspect as a gain through SSDM. It is possible that they were not conscious of their own development in professional skills. Thus, it should not be assumed that teachers did not gain any professional development just because they did not identify this as one of the gains.

Costs (Losses) of SSDM

The negative aspect most frequently identified by teachers and principals alike was the time factor associated with the SSDM
process. Teachers particularly felt that SSDM was a time-consuming process that eroded instructional and teacher preparation time. The time factor was also identified as a problem associated with participative decision-making by Solo (1979), Cooke and Coughlin (1979), and Seldin and Maloy (1979). Principals and teachers felt that to operate SSDM effectively, they should be allotted sufficient time to perform the planning and decision-making functions. Teachers in particular expressed concern that the time requirements for budget preparation and planning were added to an already demanding workload and teaching assignment. For them, time devoted to participating in decision-making processes was time not devoted to teaching activities. This perception can be overcome only if the teachers are made to realize that teaching activities require more than a fixed expenditure of time. By its nature, teaching is a job in which more can always be done.

The second most unfavourable aspect of SSDM, identified by teachers alone, concerned that increased hiring and firing authority of the principals. Since the principals had the authority to hire and fire, teachers felt that they had to obey the principals in order to "stay in their good book." A similar reaction was registered by teachers in Alexandruk's (1985) study. When asked to nominate weaknesses of SSDM, teachers in his study ranked principals' increased authority fourth.
Work-related stress was identified by principals and teachers as another unfavourable cost of SSDM. The sources were discussed in Chapter Five. In brief, the expanded role of principals and teachers under SSDM was the major source of stress. Teacher work-related stress has been reported as an outcome of wider participation by Seldin and Maloy (1979), and Duke, Showers and Imber (1980).

One aspect of SSDM which was identified by teachers as a weakness was perceived in a different light by principals. This aspect concerned the decentralization of staffing functions to the school level. Under this staffing system, teachers who have been declared surplus, or who want to transfer, find themselves operating in a "free market" environment, going from school to school to be interviewed by the principals who have vacancies. Teachers perceived this arrangement as demoralizing since it caused anxiety, stress and loss of self-esteem. Principals perceived this aspect as positive because the arrangement was made in the belief that teachers would prefer to choose their own school rather than accept a position decided by the central office.

The Balance of Costs and Benefits

It is apparent that the adoption of SSDM involves much more than a change in the location at which a budget is prepared and/or administered. SSDM demands more individual dynamism, initiative and
higher levels of commitment and energy by principals and teachers. Moreover, as Caldwell and Spinks pointed out, SSDM "... requires a range of knowledge, skills and attitudes not demanded in schools which have worked within a framework of centrally-determined policies" (1988: 20).

The increases in autonomy, sense of ownership, and curriculum flexibility cannot be attained without cost. The greater time demand, increased workload and increased work-related stress may be seen as trade-offs. In other words, the cost of SSDM may be high, but it does yield a good return.

It is noted that except for the second principal of Strathearn, all other principals perceived the benefits (gains) of SSDM as high and the costs (losses) as low.

Judging from teachers' willingness to remain on the SSDM system and to recommend it to other systems that are interested in the innovations, it can be assumed that they considered the costs and benefits of SSDM to be at least balanced. As Alexandruks wrote, "The real test of the level of satisfaction and commitment to a concept or process is found in the willingness to recommend it to others" (1987: 30).
The adoption of SSDM involves much more than a change in the location at which a budget is prepared and/or administered. The transfer of decision-making from the central office to the school, by itself a change in structure, has important and interdependent consequences for the tasks, personnel, and operations of a school. The observations of these consequences are summarized below.

Implementation Problems

(1) The picture of implementation of SSDM at the schools studied was generally positive but the principals and teachers reached consensus only after some struggle. There were no overt acts of resistance. For example, no teacher refused to be involved and there was no boycott. In general, teachers went along with the change but they grumbled a lot. All teachers experienced fear and anxiety about the "unknown" during the initial period of SSDM. Teachers perceived that SSDM was implemented with much haste in the district. Only principals were provided with some form of in-service seminar before implementation and they were expected to prepare their
teachers for accepting the major change in management. It appears that the implementation of SSDM in the Edmonton district could have been smoother if training and in-service activities for teachers had been conducted to develop new attitudes and roles that are fundamental to the new style of management.

(2) The perceived advantages or incentives of SSDM were not forcefully communicated to teachers. Since the initial expectations were not clear, it appeared that much time and effort went into developing a workable decision-making mechanism at the two schools.

Involvement of Teachers in Decision-Making Process

(1) The two schools studied did not start with staff who were strongly devoted to participative decision-making. Teachers today do not wish to be left out of decision-making concerning the school, but neither do they wish to be overly involved. Other studies indicated that over-participation as well as more frequent decisional deprivation both tended to increase teacher dissatisfaction (Conway, 1986).

(2) There was no evidence of decisional deprivation experienced by the teachers in either school. Teachers of Strathearn, in fact, were apparently more involved in all decision-making aspects owing to the smaller staff strength of the school.
Principals' Role and Leadership Styles

(1) Principals felt that the managerial responsibilities given, that is, to oversee the budget, maintenance, caretaking and rentals, had taken away time from their work as a principal teacher. Most teachers, particularly those from Strathearn, expressed a need to emphasize the instructional leadership role of the principal.

(2) All the principals in this study appeared to employ a consultative leadership style, except for the present principal of Strathearn whose style seemed to lie at the group end of a consultative-group continuum in leadership style.

Levels of Satisfaction

(1) The overall attitude survey showed that the staff satisfaction level has been falling over the last two years. Teachers in this study reported that the source of their satisfaction came from working with their students. Principals reported a higher level of satisfaction. This finding is consistent with those of other studies.

(2) Parents reported an overall high level of satisfaction with the schools studied.
(3) The 1987 student attitude survey revealed that there has been an overall decrease in the level of satisfaction among the high school students. Students at the elementary and junior high school levels continued to show a stable level of satisfaction.

Administrative Efficiency

(1) The senior administrators at the central office confirmed that cost-reduction was not the objective of SSDM.

(2) The costs per student at the two schools were found to have escalated over the last four years. The increases were not consistent with the drop in enrolments. However, the overall cost per student at the district level increased only marginally. Edmonton district seems to have achieved administrative efficiency, judging from the slight increase in the overall student enrolment, the inflation rate and the increase in staff salaries as well as gains in student achievement, and increased satisfaction levels among parents and certain categories of students.

Student Achievement

(1) A mechanism to enable comparison of student achievement before and after SSDM was not available at the district.
The results of (1) International Baccalaureate examinations; (2) Alberta Education Achievement Tests; and (3) Alberta Education Diploma Examinations showed that the Edmonton district averages were higher than the world and provincial averages for a few years. Starting from 1986, however, a lower achievement has been reported (except in the International Baccalaureate exam).

RECOMMENDATIONS

This section contains a number of suggestions for persons/systems interested in innovations like SSDM. The first part presents considerations that should be warranted in the adoption of SSDM. Some specific recommendations are given in the second part and suggestions for further research are given in the last section.

For Persons/Systems Interested in SSDM - Some Considerations

A number of concerns that have a bearing on the viability of SSDM must be considered before implementation.

Consideration 1: As changes may not be universally desired or welcomed, strategies developed to deal with reluctance to change may be necessary. The implementation of SSDM should proceed gradually and involve those affected by the change. Following the
original work of Coch and French (1948), many researchers have concluded that increased individual participation in organizational decision-making is associated with an increased probability that change will be accepted and successfully implemented.

**Consideration 2**: The advantage of starting with a pilot project should be noted. The pilot project provides an opportunity to work the idea out with relatively few people who welcome the idea of change and are committed to its success. They are able to correct problems and rectify mistakes in a sheltered environment over the term of the project. After the obvious problems have been ironed out, then a suitable date for introducing the program system-wide can be set. Sufficient lead time should be provided to enable all concerned to get used to the new system.

**Consideration 3**: Teachers are by far the largest group within the district to be affected by the implementation of SSDM. Thus they can have the greatest impact on the successful operation of a school budgeting plan. The fear and anxiety about the change and role ambiguity reported in the initial period of SSDM in Edmonton, points to the importance of developing new skills. Training teachers to prepare them for change is therefore a crucial consideration in implementing SSDM. The areas of training identified include interpersonal communication, problem identification, problem solving, shared decision-making techniques,
understanding budget and budget development, working with advisory committees, group processes, time management, and conflict resolution. The expectation of such activities would result in changes in attitudes, values, and skills in addition to changes in knowledge (Bardellini, 1977: 14).

**Consideration 4:** The decentralization of decision-making has a significant impact on the role of the principal. The tension between "principal as school manager" and "principal as instructional leader" is intensified under SSDM since the demand for managing an SSDM school is so great. This study revealed teachers' desires to have a more collegial educational leader. Similarly, Alexandruk in his study concluded that

"The perception that the school budgeting is increasing the authority of principals and creating a 'school manager' role for the principal as different from the collegial educational leader must be a concern to the district and the profession. There appears to exist a need to emphasize the educational leadership role of the principal within the school budgeting context." (1985: 43)

Thus, there should be consideration by school systems to decide on the role their principals are expected to assume. For a secondary school, the expertise of department chairpersons should be tapped to improve instructional practices. Department chairpersons are closer to classroom activities than most principals and are in a position to be viewed by other teachers as active participants in
the teaching-learning process. This position, in addition to enhancing expertise in subject matter, affords department chairpersons credibility in the eyes of teachers, something which many secondary teachers are reluctant to accord their principals (Jones, 1988 : 7).

For Persons/Systems Interested in SSDM -
Some Specific Recommendations

Some specific recommendations (not presented in any order of significance) are proposed below for the consideration of persons/systems interested in SSDM.

Measurement of Student Achievement. It would be desirable for a district planning to implement SSDM to develop a mechanism for comparing student achievement before and after the new system. Information of this nature may bring to new light the advantages and disadvantages of SSDM.

Discretion Over Personnel. It is important that principals be granted discretion over personnel. As Garms, Guthrie and Pierce wrote,

"The authority to hire personnel is essential if the principal is to be held accountable for the school's performance. The classroom teacher remains the critical link in the educational process. Without the ability to hire and assign teachers, the principal would have little control over school performance" (1978 : 281).
The growing resentment among teachers about the increased hiring and firing authority of their principals should be a concern. However, as principals are responsible for the effectiveness of their school, they should have control over who is assigned to teach in that school. It is important for principals to recruit into their teams those who share their visions, who measure up to their perceptions of a good teacher, and who are willing to take on what the schools require of them. Logically, teachers so recruited are likely to be more loyal to the principal and would do everything to justify the principal's faith in having appointed them. Teachers in an SSDM school should be convinced of the importance of this hiring and firing power.

Staff Deployment. It is found that there is a certain degree of staffing disruption within the Edmonton district as a result of the decentralization of staffing functions to the school level. Under the present staffing system, teachers who have been declared surplus (as a result of a decline in enrolment or change in program) or who want to transfer, find themselves operating in a "free market" environment, going from school to school to be interviewed by the principals who have vacancies. A form of natural selection comes into play, under which the young and energetic get the choice placements in the early stages of the process. The teacher whose area of specialty is not in high demand, however, is left to be placed at the end of the process, where the changes of a
satisfactory placement are minimal. Teachers claimed that this arrangement caused anxiety, stress and loss of self-esteem. This represents another area of concern in the operation of SSDM.

Schedule of Budgetary Preparation. The timing of school involvement in budgeting must be considered carefully. In the case of Edmonton, initial planning must occur in the early spring for operations which will commence the following September. The schools therefore have to operate on reasonable long-range projections and have to make modifications whenever more precise information becomes available. These requirements suggest that initial budget planning should be done at the district level, where reasonably valid projections can be made. The attempt to plan a detailed school budget in the spring seems impractical and illogical as principals and teachers are forced to set objectives for the education of students and classes they have not yet met and whose needs they cannot foresee. As there are too many unknown variables in spring for meaningful planning to occur, a more appropriate schedule seems needed.

Concern for Time Factor. To most principals and teachers, SSDM is a time-consuming process which has an impact on instructional and teacher preparation time. SSDM generates extra paperwork and more teacher-administrator meetings. Comments from teachers and principals indicate that there is insufficient time
allocated to the planning and budget preparation process. For teachers, time devoted to participating in decision-making processes is time not devoted to teaching activities. Teachers should be made to realize that teaching activities require more than a fixed expenditure of time. Teaching, by its nature, is a job in which more could always be done. Subject to school regulations, allocation of school time for budget planning may be warranted.

For Further Research

There is a need for further studies having much narrower focuses than this exploration to identify critical variables affecting the adoption and operation of SSDM. The suggestions are presented as follows:

Suggestion 1: The need for efficiency in the use of resources while ensuring that the educational plan or program will be effective in attaining its objectives, must remain an important consideration in decision-making at the school or district level. Accountability lies in the fact that educational resources are managed in such a way as to generate the greatest benefit to society at a cost which can be readily borne by the public (Alexandruk, 1985: 23). The importance of financial concerns is also expressed by McMahon and Geske:
"... the sheer magnitude of educational costs and the large fraction of those costs borne by the taxpayer ensure that concerns with costs and cost effectiveness will remain a major public policy issue for the foreseeable future. The public and policymakers alike are concerned about the productivity of educational institutions and are asking 'What are we getting for our money?'" (1982: 32).

A systematic cost-benefit analysis of the SSDM process would be useful to examine the efficiency of SSDM. The analysis could be designed to compare expenditures before and after decentralization and to compare systems with varying degrees of decentralization to gain a more profound conclusion.

**Suggestion 2**: A focused study to examine the effects of SSDM on student learning outcomes may be warranted.

**Suggestion 3**: A study on teachers' job satisfaction across the school districts in Alberta would provide more insight into the relationship between SSDM and Edmonton school teachers' perception of job satisfaction. (A similar study was undertaken by Holdaway and Johnson (1987) on principals' job satisfaction.) In order to measure how goals and objectives of SSDM are met, it would be useful to compare the satisfaction levels of Edmonton students and their parents with non-SSDM school systems.
CONCLUDING REMARK

The education system in Singapore is a highly centralized one. Historically, it has come about as a result of a decision to ensure that all schools maintain proper standards and contribute to the general well-being of the country. The end result is that schools in Singapore tend to develop into stereotyped units, activating themselves on instructions from the central authority. They have also come to be near replicas of each other.

For some time now, various moves have been initiated by Government officials to enable schools to function more effectively. Over a period of time, greater autonomy has been gradually devolved to principals, on the grounds that centralization had stifled initiative and creativity. Within the broad confines of the national educational policy, principals are granted greater latitude in managing schools, structuring the teaching program from prescribed subject syllabuses, and selecting and using teaching materials.

However, certain critical areas still remain beyond the control of schools and the discretion of principals. These include the flexibility in having a broader curriculum, in the selection of teachers, and in the deployment of financial resources.
The Ministry of Education recognizes the need to generate conditions in schools which would allow for greater flexibility and so produce an environment for creativity and independent thought to emerge. Rather than have schools function only on instructions from the central office, they should be encouraged to advance proposals of their own, to convert themselves into more effective educational agencies with their own distinctive identity.

As asserted by Goodlad (1984:276) "the school must become largely self-directing if it is to be improved". It is obvious that the most promising means of achieving excellence in education rests at the level of the school. The ingenuity of principals and teachers is a key factor, and conditions have to be provided for this to emerge. A new model of school management has to be developed. As there is no local model that could be adopted to lead the way, it is recommended that SSDM be examined by officials in the Singapore school system.

They would need to assess whether or not such a model could be adapted to the Singapore school situation. Perhaps through a pilot project, involving only a few schools, officials could determine whether the benefits identified in this Edmonton study might also accrue to Singapore schools.
It would be hoped that if such a pilot program were to be approved, that the designers would bear in mind some of the suggestions made in the present study. Specifically, that teachers be kept well informed at every stage of the project, and that principals of the schools involved be given specific training in areas such as group decision making, budgeting, and curriculum development, to mention only three.

However keen Singapore officials might be to adopt a more decentralized approach to school administration, it is important to point out that change is usually a slow process. It will be difficult for teachers and principals, who have worked for many years in a highly centralized system, to feel confident about a new "social order". Even more than Edmonton teachers, they may feel unprepared, and certainly more vulnerable.
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Appendix I

Procedures employed for budget preparation at Strathearn.

Step One

At a formal staff meeting in January, the principal forms a budget committee to work on the next year's budget plan. This plan includes the total amount of money to be allotted to the school based on the framework of district priorities established by the central office and the priorities established by the school.

Step Two

The committee asks for inputs from the teachers, students and parents primarily with regard to staffing and school priorities. Input from teachers is usually requested in writing. Teacher input can be made (1) individually, (2) by small groups (grade level, division level, subject area), or (3) by the whole staff. In any case, it is expected that some discussion will take place among teachers.

Step Three

The committee uses the inputs from step two to develop a budget proposal which includes such major items as staffing and a list of school priorities and objectives.
Step Four

The committee solicits the reaction of teachers to the budget proposal through discussion at formal staff meetings and written submissions, and also through informal talks between principal and teachers. The views of students and parents are sought through the student council meeting and newsletters respectively.

Step Five

The committee uses all inputs from Step Four to make final decisions and to write the formal budget document.

The different stages of involvement of the parents, students and teachers in budget preparation are clearly laid down in the procedures.