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THE EFFECTIVENESS OF SCHOOLING AND OF EDUCATIONAL RESOURCE MANAGEMENT

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A CONCEPTUAL-ANALYTICAL FRAMEWORK

by

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(Note by the Secretariat)

This is one of a series of educational monographs, either as expert contributions or country studies, in the frame of the OECD Education Committee activity on "the Effectiveness of Schooling and of Educational Resource Management".

This report presents a conceptual/analytical framework used in the activity. It identifies and analyses the various components and elements of the problem under consideration by reviewing a broad body of literature on school effectiveness and related country experiences. The framework is based on a decision-making approach relevant to studying the effectiveness of schooling, the basic assumption being that the effectiveness of schooling depends on a number of successful management decisions with regard to the fundamental functions and processes of schools, which, on the one hand, facilitate the implementation of reform policies taken at other administrative levels and, on the other, increase the effectiveness and efficiency of available resources, human and material.

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The Secretary-General of the OECD has agreed to make the report publicly available on his own responsibility.

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The Effectiveness of Schooling and of Educational Resource Management

Part I: Introduction

A. The setting of the problem

During the last twenty five years, education systems in most OECD countries have experienced conditions which have created difficulties for the exercise of effective management in general and for resource management in particular.

In the decade of the 1960s, education systems, under the demographic pressure of the post-war baby boom, were subjected to such a fast and significant growth in size that they were very often forced to pay less attention to basic qualitative requirements. The overriding priority at the time was to meet the ever-increasing societal demand for education. The need for rapid action, combined with extremely favourable financial conditions due to booming economies, reduced to a secondary consideration the importance of efficiency in the management of educational resources, at both national and local levels.

This period of rapid growth was interrupted in the early 1970s and succeeded by a decline in school enrolments due to the fall in birth rates. In countries where the decline was very marked, such as the United Kingdom, Germany, Canada, and the United States, education authorities were faced with serious resource management problems. Governments began to cut back substantially on the provision of resources to education. These new exigencies forced education authorities to pay increasing attention to the question of the efficient and effective management of the human, fiscal and physical resources of schools. In many instances, largely because of existing structural and institutional rigidities, education authorities were not particularly successful in the effective redeployment of educational resources, as has been shown in a number of national and OECD reports (1). This resulted, on the one hand, in teacher unemployment and scarcity -- sometimes simultaneously -- and on the other, in the closing down of rural or neighbourhood schools or the ineffective utilisation of urban school buildings.

At present, there is an environment of more stable demographic change but continuous public financial stringency and competing social demands. Combined with recent concerns about the goals and outcomes of schooling, the quality of education, labour market adjustments and the relationship between education and international economic competitiveness, such pressures have forced education authorities to reassess educational needs both qualitatively and quantitatively.

In response to these demands, education authorities in some OECD countries have undertaken certain reforms which have direct implications for the redistribution of administrative power among the various levels within the education system, including the school itself. The directions of these reforms appear not to be the same in all countries, however. For example, some countries with a tradition of decentralised arrangements seem to have moved towards more central control over a range of key functions; in other countries where there has been the tradition of a more centralised approach the opposite seems to be the case. In an attempt to understand these changes, a recent OECD report (2) suggests that the redistribution of power is in fact more complex than any account based on a conception of rearrangements along the centralisation-decentralisation continuum would suggest. The report concludes that the current trend seems to be for shifts in decision-making to schools to be occurring simultaneously with increases in decision-making powers and influence at the centre. Thus, terms such as "centralisation" or "decentralisation" in this context become too limited to give a complete account of what are far more complex developments, problems and issues.

The report points out that a number of generalisations can be made about the developments in OECD countries where new patterns of decision-making have emerged (3). In summary, it would appear that there has been a growing recognition that the key to the success of educational reform policies is to be found in their implementation and application at the school level. This is consistent with two decades of research on the change effort (4) and was the basic assumption underlying the extensive work undertaken by OECD/CERI on the International School Improvement Project (ISIP). A second trend that is evident is to be seen in the increasing emphasis on the responsibility of "the centre" to ensure the formulation of objectives, the provision of guidelines and the monitoring of quality control.

As reform policies attempt to affect existing patterns of decision-making by redistributing tasks, roles and general management responsibilities, within a context of persisting financial constraints, competing social demands and increased pressure to improve the outcomes of schooling, better management at the central, regional/local, and school levels becomes a central preoccupation. A matter of particular concern to be addressed in this Activity is the need, in this environment, to improve the overall management capacity of schools.

The new arrangements pose many questions for those responsible for management at the school level. For example:

- Given that the balance or match of centrally determined objectives and priorities against local needs is considered to be primarily the function of the school, how can such a balance be achieved at each school site?
- How can schools reconcile the tensions between an approach to improving schools based on enhancing the capabilities and relationships of people at the school level and the current politically and economically driven concern for centrally determined quality control?

- What is the acceptable balance between systems' concern for accountability and the desire for the empowerment and professional growth of teachers at each school site?
- How do schools address their dual accountability to their superior authorities and to their constituents in the school community?
- How do school leaders "finesse the dilemmas" (5) on the many seemingly conflicting trends in the current educational reform efforts?
- How can a situation in which there is the centralisation of control and the decentralisation of blame be avoided?

Existing institutional and structural rigidities, coupled with lack of experience and knowledge on the part of school leaders and others in more intermediate levels of management, impede the effective implementation of necessary adjustments, the performance of new management functions and the resolution of these management challenges and dilemmas. In addition, many of the reform policies have not made adequate provision to facilitate and encourage the undertaking of the new roles by those to whom the new administrative responsibilities have been transferred. For example it is not always clear who has ultimate decision-making power, since several decision making levels are simultaneously involved in particular decisions. Moreover, the new actors are not always prepared, technically or otherwise, to play the new roles. These omissions add to the prevailing uncertainties and confusion and hinder the effective management of schools and have therefore direct implications for the implementation of the various policy reforms and the assumption on the part of school leaders of improvement initiatives (6).

B. The international concern for school effectiveness

There is extensive international concern for school effectiveness. School effectiveness is both a subject for scientific enquiry and research and an "applied" field of interest in educational policy development and management.

The concept of "effectiveness" is central to the management of schools and school systems; nevertheless as yet there exists no uniform definition of an "effective school". Definitions vary depending on the orientation or theory of those examining the issue.

The definition put forward by Madaus, Airasian, and Kellaghan (7) might be thought to provide a basis for the development of a broad working framework. In their view, a school can be defined as effective "to the extent that there is congruence between its objectives and achievements. In other words it is effective to the extent that it accomplishes what it sets out to do." This account is satisfactory, so far as it goes; however, something remains to be added that relates to the effort expended (as regards economy), and to the degree of achievement, (as regards range and depth). Effectiveness will thus be a function of the economy of effort and of the comprehensiveness of the success of the effort. In addition to these factors, however, there is a

further dimension to be addressed, that must arise from any sustained consideration of the nature of the goals and of the achievements obtained.

Thus, the attainment of objectives is necessarily bound up with consideration of the means by which these objectives are attained as well as the criteria applied in the measurement of the comprehensiveness, rate of completion and totality of cover of the objectives attained (the efficiency quotient having to do with such matters as the economy of effort, time and resources expended on the task/process). The additional dimension, relating to the nature of the goals to be achieved and/or actually attained, will relate to such values as the relevance, academic standards and desirable social effects of the achievements (quality) (8). Thus both the qualitative and quantitative concerns of education are an inherent part of the effectiveness issue.

It is clear from this account that a knowledge of the multi-level range and complexity of the objectives of a school is a crucial part of any attempt to understand and assess school effectiveness. Given the extensive range of school objectives the difficulty of studying school effectiveness becomes clear. For the complexity of these objectives, the range of modes of their interplay, and the ways in which they are subject to non-quantifiable pressures and forces, will not always be capable of rational enquiry. Much research into questions of school effectiveness has tended, for this reason, to concentrate on a select number of objectives and only on those that can be stated in measureable terms.

In many OECD countries attention has been focussed in various ways on the effectiveness of schools, some of them taking account of such difficulties and complexities, some not. In some countries, most notably in the United States, there has emerged an "Effective Schools Movement". This "Movement" arose from a concern to improve student academic performance in low income, largely minority schools. Whilst this "Movement" has been the subject of academic analysis and criticism in many OECD countries it has not been broadly accepted internationally as providing a vehicle for addressing the complexities and difficulties of local situations in which change seemed to be required.

This is not to say that OECD countries have not been concerned to address the question of the ways in which schools can become more "effective" and, in particular, the ways schools can make a difference for all students, thus aiming to ensure that educational success is not primarily a function of birthright. Consideration of this issue, moreover, has been made all the more systematic and better informed by the research conducted in a range of OECD countries.

School effectiveness research has focussed primarily on the identification of school characteristics that can be held positively to correlate with educational outcomes. The genesis of school effectiveness research is generally considered to be the Coleman Report (9) on the Equal Educational Opportunity Survey, the conclusions of which, regarding the relatively limited influence of schools on educational achievement, generated research efforts in many OECD member countries, that were designed to investigate whether "schools do matter" (10) and whether they "can make a difference" (11).

In a recent examination of three decades of relevant literature, Scheerens (12) has identified four types of school effectiveness research: research on (in)equality and school effects (13); research on educational production functions (14); effective schools research (15); and research on instructional effectiveness (16). Given the delimitations of this Activity the fourth area of research, which has tended to concentrate on the micro processes of the classroom, will receive relatively less attention in this discussion.

Early research on (in)equality and school effects, such as that conducted by Coleman {et al}. (1966), found that resources and material inputs were not promising in explaining school outcomes. The Coleman study attempted to document differences in student achievement between schools and then in the light of these differences to identify policy manipulable variables which could have contributed to such differences. Had factors such as expenditure or resources been found to be associated with variations between schools, the way would have been open for policy makers to advocate changes in resources and material inputs to schools. Instead the Coleman Report concluded that differences between schools and the level of inputs to schools bore relatively little relationship to student performance: of more importance, they averred, were such factors as students' family background and the characteristics of other students in the school.

Today, after a period of extensive critique, debate and research, the research methodology and the conclusions of the Coleman Report are widely held to be seriously flawed (17).

In the period following the publication of the Coleman Report, the pessimistic conclusions it drew regarding the differential effects of schooling prompted researchers further to explore many of the variables already under investigation in the Coleman study. Much of this subsequent research concentrated on "production functions" and was based on an efficiency model of schooling derived from criteria operative in the field of economics. Production functions are interpreted as the relationship between inputs and outputs: measures of organisation and process are seen as irrelevant in estimation. Reviewers of this type of research agree that the effects on educational outcomes of the input variables under investigation in this body of work are small. Drawing on some 147 separately estimated educational production functions which have appeared in the literature since the Coleman Report in 1966, Hanushek has conducted an analysis of this work and concluded that the results are consistent in finding no strong evidence that product function variables, such as teacher/student ratios, teacher education or teacher experience, have any expected positive effect on student achievement. He adds that "there appears to be no strong or systematic relationship between school expenditures and student performance" (18).

Thus, if we think of schools as having the primary objective of maximizing student achievement, evidence from educational functions research would seem to suggest that, measured by the criteria of econometrics, schools are economically inefficient, because they pay for attributes that are not systematically related to goals. Hanushek warns against such conclusions, however, and does so on two grounds. One relates to the methods of data analysis and the other to the difficulty he sees in the consideration that "the evidence ... comes from the current operations of public schools. Yet policies that take schools outside the bounds observed could lead to different results.

For example class sizes between 15 and 40 students fall within the data; classes of 2 students or 300 students do not -- and they may show significant relationships with achievement" (19). Similarly, as current structures related to the level of pay and the distribution of pay do not appear to correlate closely with student performance, Hanushek asks why these structures should not be reconsidered. The same might apply to the financing of local school systems or the certification of staff.

It is therefore recommended that these more far-reaching considerations play an important part in the empirical-diagnostic stage of this Activity. Member countries, in addition to recognising that not all school effectiveness outcomes can be accounted for by procedures operative only in the econometric mode, may wish to reflect on the cautionary note that, even when econometric-based criteria are applied, the conclusions drawn from such researches have been found to be limited.

The failure of earlier product functions research to identify factors associated with resource inputs which could be easily manipulated in the interests of improving student achievement led to a change of emphasis in school effectiveness enquiry.

Whilst the earlier research related school inputs to school outputs, it ignored what took place in schools, that is, how the resources were used. Subsequent research which concentrated on the way schools were structured and the processes by which they made decisions, indicated that it is the utilisation of resources that is every bit as important, if not more important, than the level, amount and type of resources available.

Purkey and Smith (20), having reviewed this extensive body of literature, indicate that "while the research is more suggestive than conclusive there is evidence that certain of these (structure and process) variables have a consistent relationship to student achievement. Variables which influence schooling can be found at all levels... (including) creating a school atmosphere conducive to learning (Weber, 1971) and district allowance of school site management (Hargrove, Graham, Ward, Abernathy, Cunningham, Vaughn, 1981)". Purkey and Smith proceed to list thirteen major factors associated with school effectiveness, that they contend arise from a synthesis of this research. They set these under the categories of structure (school site management, leadership, staff stability, curriculum articulation and organisation, school wide recognition and academic success, maximized learning time and district support) and process (collaborative planning and collegial relationships, sense of community and clear goals).

A criticism that can be levelled at this body of research is that it tended to produce lists of "ingredients" of characteristics of effective schools, typically involving some combination of: strong academic leadership; a safe and orderly school climate; an emphasis on basic academic skills; high teacher expectations for all students; and a system for monitoring and assessing student performance. It is now widely held that such lists of characteristics are both simplistic in their suggestion that their adoption would work in all schools and school systems and limited in their failure to indicate how ingredients could be combined, coordinated and managed in the interests of improving schools. It is perhaps unfortunate that some

protagonists in the "Effective Schools" Movement in the United States adopted such lists and applied them as "recipes" intended to ensure school effectiveness in a wide range of different environments.

Another cautionary note that should be applied to an assessment of this body of research (21) relates to its use of narrow definitions and measurements of effectiveness. Most of these studies have concentrated on academic achievement as the main indicator of school effectiveness. Furthermore they have tended to measure school effectiveness by reference to standardised achievement tests which were presumed to measure the attainment of the school's academic goals.

However, a broader understanding of the objectives or goals of schooling is to be preferred. This is in line with more recent work such as that done in the United Kingdom by Mortimore {et al.} (22). This work has moved beyond much of the earlier North American research, with its heavy emphasis on the measurement of the cognitive outcomes of schooling as the predominant indicator of school effects. The Mortimore study, conducted on behalf of the Inner London Education Authority, concentrated on the measurement of student progress according to non-cognitive objectives (e.g. attendance, behaviour, self concept, attitude to school) as well as cognitive objectives (e.g. academic achievement in reading, mathematics, practical mathematics, writing, speaking). Using measurements including observations of classes, interviews with teachers, questionnaires for pupils, as well as the collection of statistical data, Mortimore and his colleagues found that factors associated with schools which would enable students to achieve more than might be expected included such factors as purposeful leadership of the staff by the head, the involvement of the deputy head, the involvement of teachers, consistency among teachers, structured sessions, maximum communication between teachers and students, record keeping, parental involvement, and school climate.

The Mortimore study has contributed significantly to our understanding of school effectiveness in highlighting the importance of considering intake variations among pupils when measuring effectiveness, the need for a variety of outcomes when considering the nature of effectiveness, as well as confirming the need to consider processes and to understand the culture of the school when attempting to implement change designed to improve the effectiveness of schooling.

At this stage, it might be thought useful for the purposes of this Activity to look at the work of Sheerens (23). He has provided a comparison of sets of process indicators which have been derived from the school effectiveness research and which may furnish some guidelines for the identification of areas for further investigation in the empirical diagnostic stage of the Activity. It is important to remember, however, that the majority of studies from which these process indicators have been extracted rely on narrow definitions of school effectiveness outcomes and not on the more complex and intangible ones.

Table 1: Comparison of Sets of Process Indicators

Scheerens 1989

achievements stimulants
achievement oriented policy
educational leadership
teachers co-operative planning
quality of curriculum
evaluative potential
orderly climate
time on task
structured teaching
opportunity to learn
high expectations
monitoring progress
reinforcement

Benveniste 1987

teacher time (teaching/non-teaching)
student learning time:
 -- course enrolment
•- turnover rates
•- pupil/teacher ratios
•- school day activities
•- length of school year
•- out of school learning time
 order and consistency:
•- truancy, absenteeism, vandalism, disruption
•- student turnover
 student co-operative behaviour

Seldon 1990

time allocated to instruction
content of instruction
indices of effective schooling
quality of teacher preparation
characteristics of teacher workforce
quality of teaching
participation

Windham 1988

instructional organisation
alternative technologies
use of teacher and student time

UNESCO 1976

allocation of resources
retention and progression rates
teacher/hours per pupil per year
cost and management

Taeuber 1987

instructional leadership
curriculum
types of instruction (whole class, small group, etc.)
time on task
school climate
influence of peer group

Oakes 1987

access to knowledge (e.g. instructional time)
press for achievement (e.g. graduation requirements)
professional conditions for teaching (e.g. time spent on collaborative
planning)

(From Scheerens, 1990)

Compilations of such lists unfortunately still fail to provide us with the means fully to understand the complex interplay of factors and the means whereby effectiveness may be enhanced. In an attempt to redress this weakness in the school effectiveness literature, Rosenholtz (24), in a theoretically guided study, offers an analysis of the ways such variables may combine and interact. Drawing a distinction between schools that are changing ("moving schools") and those that are not, she has been able to proffer some illumination on the ways in which variables interact so as to provide an environment conducive to learning. She concludes that the success of any strategy for enhancing student performance depends largely on the context in which schooling occurs, an inherent part of which, she claims, involves the empowerment of people at the school site. From her perspective this necessitates a "bottom-up" approach to reform so that the energy driving the processes of change emanates from the active engagement of agents at the school rather than being transmitted from bureaucrats at the centre.

This account conflicts with the view that has interpreted the findings of school effectiveness research as requiring a tighter coupling between organisational goals and formal structure through the central determination of goals, the targetting of academic aims, the establishment and maintenance of high expectations, and frequent monitoring (25).

It is for this reason that the extraction and utilisation of the implications of school effectiveness research for the distribution of decision making responsibility at school, district, state and national levels remains highly controversial.

Murphy, Hallinger and Mesa argue that one of the elements of the controversy has been the confusion regarding the "unit of change" and the "content of change and the locus of change activity". Thus, whilst school effectiveness literature suggests that the school is the major focus in bringing about changes in student performance, "to claim from this that the school is the appropriate level at which to focus educational reform efforts is to confuse the unit of change with the content and locus of change activity. Although the school may be the most important unit of change, this in no way means that it must be the key unit for development, implementation, and other activity based on effectiveness research findings" (26).

In the light of school effectiveness findings which underline the importance of a clearly defined sense of purpose and mission, Murphy, Hallinger and Mesa argue that one way to proceed is for one vision to be created and published at the central level. The centre, they argue, should also establish what is to be taught in schools by defining the basic core curriculum and the content coverage expectations in terms of graduation requirements and minimum allocations of time per subject. Substantial resource allocations and development efforts within this approach would then be devoted to the core curriculum, and major categorical programmes would be judged to the extent that they are integrated with and support such a curriculum.

In conclusion, the scientific approach to the problems of school effectiveness (particularly that emanating from an econometric/quantitative model) is replete with conceptual and methodological problems of various kinds. Further, as concerns the applied field of policy development and management in

these matters, it is important to note that there is still controversy as regards the most efficacious means by which any agreed amount of effectiveness can be achieved in schools and school systems overall.

In the section that follows, developments in school effectiveness in both the scientific and the applied field of policy formation and management in selected member countries are discussed.

C. Developments in selected OECD Member countries

{Australia }

In 1985 a Commonwealth appointed Committee "The Quality of Education Review Committee" (the QERC Report) concluded that assessing the effectiveness of schooling in Australia was constrained by the absence of unanimity as to what students should achieve, the lack of effective measures of achievement across the spectrum of educational objectives, and the difficulty of separating the effects of schooling from those of the complexity of social processes experienced by learners.

Around the same time the body of school effectiveness literature came under considerable criticism from certain sections of the Australian academic community. Questionable methodological procedures, narrow concepts of effectiveness, the emphasis on standardised achievement, the danger of creating the dream of one efficient best way of doing things, a unified notion of culture which ignores cultural contestation and simplistic prescriptions of "effectiveness" were held to characterise a movement which was seen as "socially conservative and educationally regressive" (27).

From those engaged in developing a policy perspective concern was expressed that the school effectiveness model created expectations that a correct set of variables could be mandated for all schools and that limited definitions of outcomes as achievement on standardised tests might induce schools to embark on a major reallocation of resources into basic skill areas at the cost of other areas in the curriculum (28).

Mulford's review of literature (29) enabled him to delineate only three research studies which attempted to identify the characteristics of effective Australian schools. At the time of writing, only one State Department of Education (New South Wales) has implemented a specifically designated School Effectiveness Programme.

Despite the aforementioned concerns regarding school effectiveness research and the school effectiveness "model", the question "How do we know if our educational provision is effective or not?" has become one of central importance during the last two years. There are state to state variations in systems responses to this question. At the national level, however, unprecedented steps have been taken to establish a national determination of educational objectives and a closer scrutiny of the achievement of national educational goals.

Initiatives to increase national determination and monitoring of educational goals have been introduced against a background of almost two decades of increased decentralisation and devolution to schools. As a part of these trends the model of the "self-managing" school (30), with a focus on approaches to resource allocation in a management cycle of goal setting, policy making, planning, budgeting, implementing and evaluating, has been widely applied.

{Canada}

Education is a provincial responsibility in Canada, with the school district being the unit for local policy making and administration. On the provincial level, Saskatchewan, British Columbia, and Manitoba were already addressing school effectiveness issues by 1982/83 (31). In Saskatchewan, concern for school effectiveness arose from curriculum and instruction reviews; in Manitoba, school effectiveness research was seen to provide a basis for programmes designed to increase public confidence in schools and to improve the quality of education.

With the exception of a few provinces, the pattern has been for school effectiveness initiatives to be developed at the district as opposed to the provincial level. As a result there are considerable variations in emphasis across the country.

In some districts, Directors saw the findings of effective schools research as providing a framework that could effect a change in policy and programmes. Others were more sceptical. Nevertheless numerous school districts have integrated the findings of school effectiveness research into district programmes. A survey of 250 larger school districts across Canada indicated that over three quarters of them were implementing aspects of effectiveness research. Moreover many school districts were providing staff development activities that focussed on effectiveness and were used as a basis for school improvement efforts.

An example of district effort can be seen in the work of the Halton Board of Education, which since 1986 has supported a programme to enhance the quality of the systems performance through the application of the findings of school effectiveness research. Strongly influenced by both American and English research this programme has culminated in the reorganisation of the system to support school site decision-making (32).

{England and Wales }

The reforms of the Thatcher government have been pointed to as providing the most graphic evidence that the traditional balance of autonomy, power and accountability is being shifted in education (33).

The reforms prescribe a national core curriculum and a system of national testing and reporting; control over school budgets is, as from 1 April 1990, to be given to governing bodies and head teachers of all primary and secondary schools within five years; there is to be an increase in parental choice by fostering diversity; and there is now provision for

schools to opt out of LEA control, with support grants now being made directly to schools from the national government.

The Conservative Government's policies on schooling have increased the attention paid to school effectiveness research in the political, policy-making, and academic fields. Unlike the United States and Canada, however, to date there has been no large-scale practitioner involvement in school effectiveness programmes designed to improve practice at the school site.

Following a review of relevant research, Reynolds (34) concludes that school effectiveness research in Britain is still framed in a "fledgling paradigm". Both the major school effectiveness studies of secondary schools emerged from a medical research environment (Rutter at the Institute of Psychiatry and Reynolds at the Medical Research Council), thus reflecting the strength of individualised psychological explanations and of individualised policy concerns within mainstream British research. This presents an interesting comparison with the early US emphasis on economic and social policy concerns in school effectiveness research.

The last decade has seen a considerable growth in research designed to investigate whether schools have "effects" on students; the size of those effects; the extent to which schools are equally effective on different aspects of students development; whether schools have the same effects on all pupils and the characteristics of effective school organisations.

The major challenge now facing those working in the area of school effectiveness, concludes Reynolds, is the radically new conceptualisation of what the effective British school in the 1990s might be. As to outcomes, he suggests a whole range of different skills, concerned with such crucially market-regarding operations as information handling, along with such key social skills as working collaboratively in groups, is likely to be added by policy makers to the goals of schools. As to processes, Reynolds suggests that schools in Britain now have the task of relating to parents and business communities and marketing themselves and managing their financial arrangements in a vastly different organisational context than that known before.

{France}

In France, the research work on the factors influencing the effectiveness of schools is both recent and very limited (1989). It is due to reasons relating to the research orientation in this sector; educational science was not top priority, furthermore, schools enjoy a minimum of autonomy only since the beginning of the 1980s. In fact, the research on schools was undertaken mainly by sociologists. As a result, it focused on issues related to mechanisms through which a school creates its own identity, even under conditions of limited autonomy, and not directly on factors of effectiveness. However, a number of researchers support the idea that this approach should precede the research on effectiveness factors, in order to avoid this type of research leading to the formulation of a list of criteria which could be applied to a number of quite different types of school (35).

The few studies undertaken which took into account the question of school effectiveness obtained interesting results. The econometricians revealed the impact made by schools particularly on medium-level pupils. Sociologists established the influence of such factors as the "mobilisation" of teachers or the coherence in the functioning of schools. Finally, it was shown, on the basis of a sample of 80 colleges (lower secondary schools), that the factors affecting school effectiveness vary according to whether or not the school population comes from a disadvantaged background (36).

Under such conditions, it is understood that policies for increasing school effectiveness were implemented on the basis of different criteria. Nevertheless, some policies seem to have followed what has usually emerged from this branch of research; such as, for example, increased school autonomy and the encouragement of principals to become instructional leaders. In addition, emphasis was placed on the evaluation of both pupils and schools.

{The Netherlands}

The Dutch education system is characterised by centralised planning and policy-making and decentralised implementation.

Since the 1970s a number of large innovation projects aimed at changing the structure of the Dutch education system have been underway. These have included the integration of kindergarten and elementary schools into primary schools, the introduction of a basic compulsory curriculum for all students of school age, and the introduction of an educational priorities programme. An inherent part of these reforms is the granting of more autonomy to schools, especially in decision-making for specific budgets. At the same time, attention is also being given to the matter of the achievement of educational outcomes (37).

From 1980 onwards there has been a growing body of Dutch research exploring the relationship between school characteristics and student results. Scheerens and Creemers (38) have presented an overview of Dutch studies. The twelve research projects involved in their review showed positive results for individual factors such as: orderly climate, high expectations, frequent evaluation, direct instruction, and achievement orientation. After their examination of the Dutch data, Scheerens and Creemers suggest that, unlike the evidence emanating from the United States, there is an absence of a strong relationship between leadership and effectiveness.

In view of what they claim to be the failure of factors isolated in the US studies to hold for the Dutch situation, Dutch scholars have called for a reconceptualisation which gives more attention to (country) context factors in understanding school effectiveness. Dutch scholars also call for more attention to be paid to redefining goals in enhancing school effectiveness with more attention being paid to quality and equity -- goals which are embedded in societal and political measures and processes.

{Sweden}

There is a growing interest among both Swedish academics and in the Swedish school system itself in measuring school effects. A programme of nation-wide evaluation is now being developed by the National Board of Education in cooperation with several researchers from different universities.

There are also projects underway using the methods of meta-analysis to investigate the contributions of different factors to student outcomes.

An "Effective Schools Programme" has begun in Norkoping which focusses on the relationship of school climate, instructional leadership, high expectations, clear goals, parental involvement and evaluation to student achievement, student self appreciation, attendance, and school climate (39).

{United States of America}

Since the 1960s research on effective schooling in the United States has generated a substantial corpus of literature. Researchers have been interested in addressing the following questions: what makes a school effective? What are the characteristics of effective schools? How can these effective schools characteristics be implemented in low-achieving schools to make them more effective? (40)

In the United States the main indicator of an effective school has been considered to be student achievement in academic subjects, with special emphasis being placed on increased academic achievement for "at risk" students. Measurement has tended to be based on standardised tests.

Many major cities, including Chicago, Milwaukee, Minneapolis, New York, San Diego, St Louis and Washington DC have implemented programmes based on the findings of school effectiveness research. Many State Departments have established Effective Schools Programmes.

Controversy has emerged in the United States regarding the most appropriate method of implementing such programs. The implications of school effectiveness literature for educational governance was addressed in the early 1980s by Chester Finn (41). Finn argued that schools would become more effective if they had "strategic independence". This would involve recognition of the school as the key organisational unit; devolution of more budgetary authority to the school; and encouragement to schools to be different except for core knowledge and skills. Under these arrangements, educational standards would be set by central authorities but these would cover broad goals and essential outcomes and not specific criteria, curricula and timetables.

In the implementation of school effectiveness programmes, however, more emphasis has often been placed on "tight coupling" of organisational arrangements and "top down" approaches to change.

In recent times critics have argued that this has simply forced people to work harder on activities which have already proven to be ineffective. Instead more radical approaches have been recommended which frame the problem

of improved schooling in terms of altering basic structures and systems of control.

Chubb (42), for example, argues that, if schools are to develop the organisational qualities that research in the United States has indicated are essential for real educational gains, it may be necessary to emulate the system of control that governs private schools. In such an approach to governance the centre would provide graduated funding and set basic standards but virtually all important decisions about policy, organisation, personnel, etc. would be handed to schools and their clients. This suggestion bears considerable similarity to changes currently underway in the United Kingdom.

Part II: The Decision-making Approach

A. Identification of decision-making areas

Informed by the review of literature and the experiences of OECD Member countries, areas of decision making which might impact on school effectiveness will now be delineated. The delineation of areas of decision-making could provide a framework for the empirical-diagnostic work to be conducted in Member countries.

Although there are empirically verified sets of relationships it must be pointed out that, up to this time, there exists no empirically tested, integrated model of school effectiveness.

The main areas of decision-making, that will impact upon the effectiveness of schools, will include the following types of decisions:

- Who will decide what will be taught to whom?
- Who is to be the learner?
- Who is to be taught?
- What is to be taught and learned?
- For what purposes is the teaching/learning to occur ?
- How is the content of teaching to be delivered?
- In what context is learning to take place?
- How is the teaching/learning process to be resourced?
- What resources are needed?
- How is progress to be assessed?
- What are the appropriate organisational structures and administrative processes?

The levels and loci at which each of these various decisions will be made will vary from country to country and system to system.

With respect to the foregoing list of areas of decision-making, an example might be useful. In the United Kingdom, for instance, under current arrangements decisions are formed, taken and implemented at different levels. The questions of who is to be taught, what is to be taught, for what purposes and how learning success is to be assessed, are matters for central government determination and injunction. The matter of the resources needed is generally settled at the system/local area level, while to the School Council, under Local Management of Schools (LMS), is arrogated the decision as to how teaching and learning processes are to be resourced (though this can include such important matters as the engagement/termination of staff). The function of the professional educators taking decisions at the school level under this schema is to determine how the curriculum is to be delivered and what teaching methods are most appropriate for these purposes.

B. Areas of special concern

The effectiveness of schooling depends on a number of successful management decisions with regard to the fundamental functions of schools which, on the one hand, facilitate the implementation of reform policies decided at other administrative levels, and, on the other, increase the effectiveness and efficiency of resources: human and physical.

Among the possible range of broad areas that relate to the effectiveness of schooling, the following constitute perhaps the most fundamental ones, requiring systematic decision-making analysis:

- a) design and implementation of reforms conceived to achieve the objectives and goals of schooling:
 - • -- administrative reforms;
 - • -- structural reforms;
 - • -- curriculum reforms;
- b) quality and performance evaluation: current practices and future needs to meet reform objectives;
- c) management of human resources:
 - • -- pupils;
 - • -- recruitment, selection and experience of teaching staff and planning of their pre-service and in-service training in view of new tasks and responsibilities;
 - • -- school relationships with parents and the community at large (including work places);
- d) management of physical resources:
 - • -- management of available financial resources, planning of future needs and capacity to raise funds outside traditional sources;
 - • -- construction, maintenance and utilisation of school facilities and buildings;
- e) building up a capacity to innovate and experiment;
- f) educational leadership and management.

C. Tensions and points of friction

In the light of existing administrative and judicial arrangements and various policy reforms recently set in hand, we may still observe some points of tension, areas of friction and institutional or systemic inefficiencies which limit the effectiveness of schooling.

Many of the problems arise from the fact that in any reform effort there are multiple desirable priorities. It was perhaps for this reason that, after two decades of studying change in education systems, Fullan (43) argued that the most realistic model for change is one that enables people to attempt to achieve some balance among these priorities, facing problems, challenges and dilemmas, consolidating, adapting, and building as they go along.

This suggestion fits in well with another possible strategy emanating from the evolutionary approach to problem-solving proposed by Popper (44). He claims that a substantial problem for policy-makers arises from the nature of institutions and the processes undergone by them, not all of which are amenable to rational investigation. There is, Popper would argue, an irrational element in such processes, which renders the approach adopted by scientists of the positivist persuasion liable to errors, of which the least would be a simple-mindedness and the worst would lead to large-scale misunderstanding in anyone's attempt to grasp problem-situations and produce tentative solutions for them. For this reason Popper would advocate a turning-away from the millenarianism so enthusiastically espoused by some policy-makers and propose instead an activity of evolutionary policy construction and pragmatic problem-solving. In Popper's approach, what matters is, first, that the nearest and most readily tractable problem be identified and defined (PS: problem situation); second, that a tentative hypothesis be framed as to the way (ways) in which the policy-maker proposes to attempt the solution of that problem (T1: the trial solution); next -- and, for Popper, the most important scientific stage -- comes the crucial part of the whole process, in which criticism from all quarters is sought in an effort to contest and if possible overthrow the trial hypothesis (EE: the stage of error elimination); finally, (should the hypothesis resist all efforts at disconfirmation), comes the point at which the policy-maker is satisfied that the proposed hypothesis may be accorded the status of tentative solution (T2) and go forward as a highly provisional theory, always subject to the expectation that in a few months or years, this too will prove liable to correction or refutation.

An example of the utility of this method in analysing the change process may be found in the United Kingdom approach to the policy problem of a change to the process of secondary education, when it was realised that the tripartite system set up in 1944 Education Act was gravely dysfunctional, not only to the endeavour to provide the right kind of education for all ranges of ability but also to such important social goals as increasing access and ensuring equity. Starting with the Labour Party Conference in 1946, the hypothesis was framed that comprehensive schools would address both needs and that a wholesale change to such schools would effect a high degree of social integration as well as providing a quality education for all. Under a Labour Government in the 1960s therefore the process of comprehensivisation was instituted on a large scale and brought to completion in the late 70s. It was at that point that social scientific investigations, of which perhaps the most well-known was that of Dr Julianne Ford of the LSE, began, that showed to what extent the original hypothesis was flawed (Ford, for instance, demonstrating that comprehensive schools, so far from removing barriers between social classes, actually reinforced them). It was only after similar criticisms with respect to academic standards and coverage of syllabus began to be shown up [by such authors as Cox, Dyson and Ford writing in the {Critical Quarterly} series in the late 70s and early 80s (otherwise known as the Black Papers)] that proponents of comprehensive education began to realise that their original thesis was in

need of amendment and modification, in order to ensure that the initial goals could still in some measure be attained. This led to changes in the structure and internal organisation of comprehensive schools, some of the effects of which were beneficial so far as one goal is concerned -- social cohesion -- but still fell short of the other, that of heightening academic attainment and maintaining standards for the generality of the school population. It was perhaps in the attempt to redress this balance and to promote academic standards that the Thatcher government in the United Kingdom introduced such measures as the Assisted Places scheme and, later, a core curriculum and a system of national assessment.

The point of this example is to show that, in a field so complex as school effectiveness, with its range of goals (academic and social), not only are the understandings required similarly complex but the processes of policy-formation must be highly articulated, evolutionary and always subject to review. What might be worthwhile pointing out is that (a) the process of change has no {terminus ad quem;} (b) the pace of change is slow and not uniform; (c) a problem solved in one area will be liable to generate another in another; and (d) there will almost never be a point at which one may confidently say that the evidence is all in.

If one adopts this approach to understanding the change effort, it is clear that making one small alteration in one area will have a "spread-sheet" effect, the difference being (such is the complexity of the range of problems associated with and arising in policy change processes and the multiplicity of levels on which effects are felt) that such an effect may also be observed to operate not only on the horizontal plane but also down the vertical range -- a very three dimensional spread sheet, as it will seem. It might, of course, be claimed by proponents of the rationalist model of planning that any sophisticated computer programme could apply its intelligence to comprehending and representing such effects in a three dimensional model and it could be tempting for policy implementers to try to develop such a model and put it into place.

Such a strategy would still fail to be adequate, however, for the reason that what also needs to be considered is the extent to which intangible factors arising from human conscious and unconscious purposes and drives will also exert determinative effects on the processes of policy formation and change, and that these are beyond the reach of even the most sophisticated devices of artificial intelligence.

As a strategy for working one's way out of problem areas replete with complexities of this kind, we are helped by the proposal of Imre Lakatos, Popper's successor in the Chair of Logic and Methodology at the London School of Economics. He argued (45) that there is a need, in such situations, to establish those areas in which different approaches to the solution of a policy problem can be reconciled. An example of this might be the desire of the Left (as in the UK in the example cited above) for the promotion of social goals, such as those of increased equity and access, and that of the Right for an emphasis upon the pursuit of academic excellence and the maintenance of academic standards. Lakatos would suggest that, for both parties in such a dispute over policy priorities, there is in fact an area of common interest -- what he called the "touchstone" -- and this might be thought to reside in the realisation that both goals are predicated upon the maximisation of

schooling for all students from all backgrounds, organised in ways that enable all to capitalise on the widest range of educational opportunity.

Lakatos further added that comparison of and competition between different perspectives and ideologies in such matters may be found both possible and productive, in that their effectiveness may actually be tested against each other in the touchstone area. This would be done by policy-makers looking at what are commonly agreed upon in the community/country in question as desired educational outcomes -- in this case, a wider range of educational successes on both grounds, done more efficiently and effectively, and likely to be achieved over a longer time-scale, with an increase in the degree of fecundity as regards other educational, institutional or systemically valuable outcomes.

In the light of the foregoing discussion of the difficulties in the policy making process and in our acknowledgement that such difficulties are an inherent and expected part of problem solving we may now proceed to identify some of the various points of tension, friction and inefficiency in the above areas of special concern.

The question of the design and implementation of administrative, structural and curriculum reforms to achieve the objectives and goals of schooling.

One of the problems in the existing state of scientific enquiry into school effectiveness has been its limited goal focus. Much of the earlier work, in particular, focussed exclusively upon academic achievement as the sole criterion of school effectiveness. Whilst more recent studies have taken into consideration broader academic and social concerns, the research is still unfortunately extremely limited and has not yet been able to add the desired store of enlightenment to guide the policy-maker and administrator faced with the challenge of enhancing the effectiveness of schools.

x Underlying this difficulty is a major problem, that has to do with the relationship between the work of the researcher and that of the policy-maker and administrator. The former is always bounded by methodological and conceptual constraints and these structure and define acceptable parameters for his/her enquiry; the latter has to take into account a wider set of considerations, that relate to areas of economic and administrative efficiency and political, social or moral desirability.

In countries' attempts to design and implement administrative, structural and curricular reforms designed to achieve the objectives and goals of schooling, the following may be seen as important questions for consideration and review:

- a) What process may be employed to identify the multiplicity of educational goals? Is it possible to achieve agreement on the objectives of schooling? Is it possible to "read " the future and its requirements for education? How can the problem of massive expectations and internal paradoxes among goals be addressed?

- b) How is it possible to achieve a match between goals and structural arrangements? For example, how is it possible to achieve such learning goals as critical thinking, creativity, and problem solving, within the current structures and organisational imperatives of schooling?
- c) How is it possible to link goals with implementation strategies and pedagogy? Some countries have concluded that central control over curriculum, curricular materials, and assessment will better ensure the achievement of the countries' educational goals. What impact might these administrative strategies have on pedagogy designed to promote such goals as the development of a critical and creative intelligence ?
- d) What are the tensions between the articulation of goals and the evaluation of their achievement? How can a situation be avoided in which the tests rather than the goals drive the teaching/learning process? Is it possible to reconcile central determination of goals and quality control with the operation of a school centred system?
- e) Administrators are often compelled to operate in the face of acute external pressures and without the complete resources and technology to achieve the goals that have been set. In such a context top-down approaches tend to be those that are the most administratively convenient and readily applied but they are not necessarily the most consistent with specified goals. Sometimes the unanticipated effects are antithetical to the original aims. How might the implementation process be timed and managed to ensure the selection of those strategies that are likely to bring about results most consistent with goals?
- f) What have been the relative merits of bottom-up and top-down approaches to change?
- g) What is the appropriate balance, if there is one, between choice at the school site level and mandate from the centre? How might incentives and sanctions be applied? What are the implications for the school of changing relationships along the centralisation-decentralisation continuum?
- h) What, if any, have been the unintended consequences of differing approaches to the implementation of reform efforts? What decision making arrangements bring about more achievement for students?
- i) What aspects of existing systems' internal {logique }facilitates or hinders effectiveness?
- j) How can the centralisation of control and the decentralisation of blame be avoided?

{The question of quality and performance evaluation}

In the governance of education a major structural tension exists between issues of autonomy and accountability. It is generally accepted that in any government system of education some form of accountability is necessary (46). The traditional bureaucratic approach was to hold teachers and school leaders accountable through the imposition of rules and the concomitant requirement for record keeping. This approach can still be seen in operation in some highly centralised education systems.

Another approach to accountability concentrates on the monitoring of the outcomes of schools. In systems where this approach is in operation the outcomes that are monitored tend to be those that can be readily quantified and measured. In recent times there have been moves in countries such as the United Kingdom and the United States for information about the outcomes of schools to be published and made available to the public. It is assumed that, armed with such knowledge, public regard for "market forces" will act so as to bring pressure to bear on schools to improve their effectiveness. In light of what we have learned about the importance of taking into consideration student input data and the need to measure student progress over time in order more fully to understand the differential effects of schools, however, considerable caution must be exercised by administrators and policy-implementers, in order to ensure that the data available to parents are sensitive to such complexities and not open to misinterpretation.

A third form of accountability requires school based personnel to "render an account" describing school processes and outcomes. This is often considered to be a more professional form of accountability demand as it is less centrally determined and regulatory and, in the view of some theorists, will provide a more appropriate context within which effectiveness questions may be addressed.

In the light of the above, the following questions may be thought relevant:

- a) How is it possible to provide schools with greater autonomy in return for their taking greater responsibility for performance?
- b) What is the balance between local, state and national responsibility for monitoring quality and performance evaluation?
- c) Is it possible to create a school-based approach to improving student outcomes?
- d) How can a culture be developed in schools in which school-based personnel become more self appraising and critical? Is school self-monitoring achievable?
- e) What is the balance, if there is one, between the system's need for accountability and the creation of "professional" schools?
- f) How do you resolve the tension between centrally determined quality control and the empowerment and professional growth of people at the school site?

- g) Professional autonomy has as an inherent part of it -- professional accountability. How can a self-accounting education system be developed?

{The question of the management of human resources}

The most important of all resources in schools are pupils. In determining the effectiveness of schools, early studies adopted a simple relationship between pupil outcomes and school effectiveness. More recent studies challenge this approach and instead highlight the importance of considering the characteristics of pupils at their point of entry to the school, and their progress over time. Similarly policies and strategies such as those related to teacher/pupil communication, structuring of the pupils' day, pupils' noise and movement have been considered in calculations.

In respect to teachers the school effectiveness research has clearly established the positive relationship between student outcomes and teacher variables, such as teacher commitment, high teacher expectations, and teacher collaboration. The research has also identified variables such as the articulation of clear goals and close monitoring of achievement which when translated into policies and strategies for implementation have often been in danger of destroying the very conditions in which effective teaching can take place. The issue is not that the findings of school effectiveness research regarding the importance of teachers is contradictory; rather the administrative solutions to implementing the findings have been inadequate in addressing the complexities involved.

Possibilities of the utilisation of other human resources available to the school, in particular parents and other members of the school community, have not been widely investigated in the school effectiveness research. The relationship between family background and student achievement is clearly established; yet the ways in which the parent and community resource can be managed in the interests of improving the effectiveness of schools are not clear.

In the light of the above the following may provide some lines for inquiry:

- a) When assessing the effectiveness of schools what consideration is given to differences in educational outcomes and progress according to the age, social class, sex, and race of pupils?
- b) To that extent are the characteristics of pupils at their point of entry to the school considered in calculations of effectiveness?
- c) Is there any evidence that some schools are more effective than others in promoting pupils learning and development when account is taken of variations in the characteristics of pupils in the intake to schools? If some schools have been found to be more effective than others, what factors have been found to contribute to the positive effects for pupils?
- d) When assessing the effectiveness of schools what attention is paid to variations in the non-cognitive outcomes of education for different

groups of pupils? What non-cognitive outcomes are considered in calculations?

- e) What policies or strategies have your system(s) introduced regarding areas found to be associated with effectiveness, such as:
- • -- pupil/teacher communication
 - • -- pupils' involvement in their work
 - • -- pupil noise and movement
 - • -- teachers' use of critical control over pupils
 - • -- structuring the pupils' day
 - • -- positive atmosphere in the classroom
 - • -- work centred pupil environment
- f) System wide personnel policies may conflict with the achievement of the conditions found to exist in "effective" schools. The research on school effectiveness, for example, highlights the importance of staff collaboration. At the system level, however, the assignment of staff may militate against the achievement of collaborative effort. What policies of selection and assignment might facilitate the achievement of the conditions associated with effective schools? What external authorities and constraints limit the ability of the school system to bring about such change?
- g) What are the implications of more closely relating the assessment of staff to student performance?
- h) Is it possible to link the assessment of the performance of the school leader to student performance? How might a system deal with the leader of a school which is not achieving its goals?
- i) How can teachers be encouraged to integrate the findings of research into their practice? How can schools become "communities of learners" in which teachers and administrators are also engaged in the process of learning? What types of relationships might be developed with universities and other institutions of higher learning to promote the growth of schools as learning communities?
- j) What are the standards for setting teachers' pay? If teacher salary does not correlate with student achievement, are there ways of relating pay to improved teaching/learning performance? The idea of merit pay may militate against collaboration and may conflict with professional concerns and interests: are there viable alternatives? How important is the level of emolument in the attraction and retention of teachers?
- k) In the pursuit of quality teaching, of what value is personal and professional experience gained in situations outside teaching? In pursuit of improved teaching skill, what strategies are effective in revitalising teachers?
- l) What steps are necessary to restore teaching to a place of high public esteem amongst the professions?

- m) How can parents' interest in the education of their children be best utilised? Is parent participation most appropriately channelled through participation in school governance or through more direct involvement in the teaching/learning process?

{The question of the management of physical and financial resources}

The school effectiveness research does not indicate clearly the contribution of physical resources, such as facilities, to effective schooling. Current evidence seems to suggest that, while physical resources may not be actual determinants of achievement, they do provide the context in which teachers and students can interact and thereby create the social psychological resources which are related to effective schools. One of the problems in understanding the contribution of physical resources to effectiveness has been that over time administrators and teachers have come to design school buildings, organise space and use time in a remarkably similar way across school systems. As a result there have been few bases for comparing differential effects. Critics such as Cuban (48) would argue that these arrangements have been made to meet the imperatives of managing students in an orderly and controlled manner rather than in response to the priorities of teaching and learning and that for real change to occur we need a fundamental change in the way such arrangements are conceived.

Early interpretations of school effectiveness research also suggested that increased expenditures {per se} did not "make a difference" to school performance or offer an overall promise for improving the effectiveness of schools. Some school systems have interpreted this to mean that increasing expenditure to schools is therefore less important than redirecting existing funds to promote the processes found to be associated with effective schools.

Changing patterns of school governance have meant that in some countries more responsibility for finance and budget decisions have been relocated to the school site. There is some concern however that the shifting of responsibility for such decisions may distract school based personnel from the primary task of schooling, namely learning and teaching. In particular the fear has been expressed that the relocation of decisions of this type may alter the role of the school leader to such an extent that time and energies may be concentrated on resource management at the expense of educational leadership. In light of school effectiveness research findings regarding the relationship between improved educational outcomes and the school leader's role in exercising leadership in teaching and learning, this constitutes a serious concern. Caldwell (49) argues that such fears can only be allayed if the purpose for new patterns of management are expressed unmistakably in terms of their contribution to the goal of quality schooling. Communicating this purpose, preparing school based personnel with the skills to exercise their new responsibilities, and providing the administrative and technical support for resource management to be properly incorporated into the overall educational management of the school therefore becomes an important responsibility of the school system.

In the light of these developments a number of questions would seem appropriate for review:

- a) Does the school have the capacity to depart from existing norms and innovate as to how to spend money, how to distribute work load etc.? What should be done to endow the school with such a capacity if this is not contradictory to overall systems objectives?
- b) How might administrators, teachers and students use physical resources including buildings, time and space in different ways to promote effectiveness?
- c) Some highly centralised bureaucratic education systems were based on the assumption that such administrative structures and arrangements were necessary to ensure uniformity in the provision of services and equity in the allocation of resources to schools. How is equity respected in changing patterns of resource allocation and management?
- d) What are the resources required for the "process" of implementing system wide change? What are the direct and indirect costs involved?
- e) How do effective schools use their financial resources regardless of level of funding? Can anything be learned for the management of government schools from the financial management practices of private/non-government schools? Would direct funding to schools enhance the delivery of teaching and learning? How constraining are tied resource grants? Are strategies such as programme budgeting more useful for accountability purposes than for the delivery of effective teaching and learning?
- f) What is the most economical way in which to provide school facilities? Should school buildings be leased rather than owned? Should they be built with short-term expectancy? Have advances in technology altered the concept of schooling being conducted in fixed locations? What are the gains/losses of creating multi-campus, amalgamated and rationalised schools?
- g) What are the most effective "aids" available for quality learning? Are strategies such as leasing of equipment the answer to obsolescence?
- h) Can schools operate on a market basis when some schools for a variety of reasons are "ahead" to begin with?
- i) How is it possible to evaluate schools when they have uneven resources? What is the acceptable level of unevenness in a public system of education?

D. Implications for leadership and management

The capacity to innovate and effectively manage a school or school system is not only a function of administrative and judicial freedom and autonomy but also of the qualifications of the managers. The pertinent

question here is the following: in the context of a changing political, social, economic and technical environment in which altered patterns of educational governance have brought about changes in the decisions to be taken at different levels of the school system, what are the qualifications required of those people now responsible for educational leadership and management?

This report supports the view that effective management and visionary creative leadership require the linking together of an external and an internal view, a strategic and operational perspective simultaneously. As Gilmore and Krantz have argued: "At the boundary between any unit and its wider organisational context, or alternatively, at the boundary between the enterprise and its wider environment, a leader integrates the units mission or strategic orientation with the tools and means for accomplishing it. It is specifically the function of leadership to weave the two -- to articulate an appropriate mission which the resources of the unit can realistically achieve and to deploy its resources efficiently in the service of its primary tasks" (48).

This perspective on leadership and management, which is drawn conceptually from the work of the Tavistock Institute, recognises the environment of dense interdependence and unpredictable connections which arise from the accelerated political, social, economic and technical changes in which educational administrators must operate. It is a challenge to the frequently held distinction between leadership and management, which Gilmore and Krantz see as associated with the "segmentalist" culture that inhibits innovation and adaptation.

Gilmore and Krantz argue that the separation or "splitting" of leadership and management arises from the anxieties inherent in attempting to administer complex organisations and serves as a defense to diminish, evade or trivialise the deep changes and sophisticated attention to primary task or mission that is required.

To extrapolate from this literature the substantive leadership required to revitalise or develop schools in the turbulent environment of post-industrial societies would require people who are prepared to:

- grapple with the complex realities of their current situation and confront the difficult substantive issues of schooling;
- enable the group to work through difficult dilemmas over issues of direction and purpose;
- take action under ambiguous conditions;
- sustain the capacity for continuous organisational flexibility;
- enter into responsive relationships with "partners" and "clients" across the enterprise boundary;
- acknowledge each person's interdependence and handle the anxieties inherent in collaborative relationships;

- link new and visionary ideas with the organisational tools, methods and apparatus to realise them;
- continually struggle with the value-laden issues underlying their technical expertise.

Part III: Current Trends and Future Developments

Concern regarding the quality of education, the goals and outcomes of schooling, the relationship between education and international economic competitiveness, continuous financial stringency and competing social demands for public funds have forced educational authorities in many OECD countries to reassess educational needs both qualitatively and quantitatively. For these reasons considerations of improving the effectiveness of schooling have tended to be based around policies of rationalised budget allocations and accountability. In most countries the concern has been, if not how to achieve effectiveness at a lower cost, at least how to achieve effectiveness in the most cost-efficient manner.

Restricted budgets have led to increased attention to efficiency in the public service. In some countries this has been associated with a change in the very concept of "public service" and to fundamental changes in styles of public administration. The new model of public administration in countries such as the United Kingdom is more consumer oriented, and professional values and the rules and traditions of managerial hierarchy are making way for market oriented behaviour and a concern for the immediate satisfaction of client or "public" needs. Countries following this approach have tended to move into more global reforms, using external strategies for evaluation in which the public authorities at the centre set the goals for education and monitor and distribute information about performance, whilst the clients are given the opportunity to assess the quality of that performance and make choices, assuming that quality is generated by competition between institutions. In this situation clients are given more information and more influence on decisions about how resources are spent and educational management becomes more highly politicised and changes according to the new demands.

Not all countries are following this trend, however. In France, for example, there is an awareness of the limitation of the consumer approach to the full range of values, representations and expectations vested in the public education system. In countries such as Sweden there has been an emphasis on rolling reforms, based not on changing the nature of the public service but on improving the quality of that service by a range of internal mechanisms, not least of which is the improvement in the human resource through professional development.

Nevertheless, no matter what the orientation of reform most countries have directly addressed resource issues in their reform efforts. Moreover the more stringent financial situation has had important implications for the aims, objectives and methods of evaluation moving it beyond a concern to measure student achievement for professional purposes into a more public and political arena addressing overall school performance, particularly compatibility with national objectives and effective use of resources. This has been deemed all the more important in light of changing patterns of relationships between the

centre and periphery of education. In this context the effectiveness of schools and of educational resource management has become of central concern.

This report has argued that the concept of effectiveness is central to the management of schools and school systems; nevertheless as yet there exists no uniform definition.

To assist in overcoming this problem, in the report a broad working framework for considering school effectiveness was put forward. This included consideration of:

- the nature of the goals of schooling and the achievements obtained (this relates to such values as the relevance, academic standards and desirable social effects of the achievements i.e. quality);
- the congruence between achievements and objectives;
- the means by which objectives are obtained (having to do with such matters as the economy of effort, time, and resources expended on the task/process);
- the criteria used in the measurement of the objectives obtained (as regards the range, depth, comprehensiveness and totality of cover).

The report revealed that since the late 1960s research into school effectiveness has been conducted in a range of OECD countries. It was concluded from a review of literature, however, that the findings were of limited value in guiding the policy maker and administrator faced with the challenge of improving the effectiveness of schools.

Underlying this difficulty is a major problem that has to do with the relationship between the researcher and the policy maker and administrator. The former is always bounded by methodological and conceptual constraints and these structure and define acceptable parameters for his/her inquiry; the latter has to take into consideration a wider set of considerations that relate to areas of economic and administrative efficiency and political, moral and social desirability.

Given the extensive range of school goals and objectives the difficulty of researching school effectiveness becomes clear; for the complexity of these objectives, the range and mode of their interplay and the ways in which they are subject to non-quantifiable pressures and forces will not always be capable of rational inquiry.

Criticisms of research into school effectiveness by some members of the academic community have been exacerbated when they have observed policy-makers and administrators, often operating in response to political pressure and time constraints, but armed with only limited understandings of the conceptual and methodological problems inherent in the school effectiveness research, translating the findings of this research into policy and practice. The emergence of a "School Effectiveness Movement" that has been perceived to offer simplistic solutions to the complex problems of improving schools has crystallised this opposition.

The issue of improving the effectiveness of schools will not disappear for the policy-maker and administrator, however, and, notwithstanding the conceptual and methodological problems, some insights have been gained from the existing body of knowledge derived from school effectiveness research. In particular it has established that:

- schools can "make a difference" in ensuring that educational success is not primarily a function of birthright;
- the ways schools are structured and the processes by which decisions are made and the resources are used contribute to "schools that matter".

School effectiveness research has tended to enlighten us most on the school variables associated with effectiveness. The extraction and utilisation of the implications of school effectiveness research for the distribution of decision making responsibility at school, district, state and national levels remains highly controversial.

One view has interpreted the findings of school effectiveness research as necessitating a "bottom-up" approach to reform in which the energy driving the processes of change emanates from the active engagement of agents at the school site rather than being transmitted by bureaucrats from the "centre". This account conflicts with the view that has interpreted the findings of school effectiveness research as requiring a tighter coupling between the organisational goals and the formal structure through the central determination of goals, the targeting of academic aims, the establishment and maintenance of high standards and frequent monitoring.

Among OECD countries there is variation in the extent to which the findings of school effectiveness research has informed policy and practice. Similarly there is variation in the emphases given to "top-down" and "bottom-up" approaches to change.

To assist in better understanding the emerging patterns and trends in educational decision-making in OECD countries, this report has identified the main areas of decision-making that may impact on the effectiveness of schools and pointed to the levels and loci at which these various decisions could be made. It has also indicated the points of tension, friction and inefficiency which inhibit their reform efforts.

In a field so complex as school effectiveness with its range of goals (academic and social) it is argued that the understandings required are similarly complex and the processes of policy formation and administration must be highly articulated, evolutionary and always subject to review.

It is pointed out that in such a field (a) the process of change will have no {terminus ad quem}; (b) the pace of change will be slow and not uniform; (c) a problem solved in one area is likely to generate a problem in another; and (d) there will almost never be a point at which one may confidently say that the evidence is all in.

It is concluded that, in the environment of dense interdependence and unpredictable connections which arise from the accelerated political, economic,

social and technological changes in which educational administrators must operate, there is the need for the linking together of management and leadership, a linking of new and visionary ideas with the operational tools, methods and apparatus to realize them -- a linking, in other words, of the quantitative and qualitative concerns of schooling.

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END-OF-TEXT