EFFECTIVE SCHOOLS?

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Introduction

By the turn of the decade (1990), writing on 'effective schools' had reached a saturation point in education publications. At least a dozen 'reviews of the literature' had been published, several prominent journals had devoted 'special' issues to the topic, and the accumulated research (and researchers) feverishly crossed Western borders to 'apply' these findings in the Third World.

Despite the proliferation of effective schools literature, there remains some serious weaknesses in the existing knowledge base. First, most reviews -- even critical ones -- have argued within what could be called the effective schools paradigm. That is, having accepted the notion that effective schools exist and that their characteristics can be modelled or check-listed, the task was then simply 'to get better at' measuring such characteristics. Second, while critiques abound, very few systematic and coherent attempts have been made to propose alternatives either within or outside of the effective schools paradigm. And third, much of the application of the effective schools research outside of the West has erroneously rested on fixed assumptions about schooling and resources transferred to the developing world.

This paper is different from existing reviews in that it (i) applies a critical framework to the assessment of the effective schools literature; (ii) examines the transnational impact of this literature and its limitations in the developing world; and (iii) proposes an alternative which rests on different methodological, epistemological and resource assumptions from those underpinning the effective schools literature.

Background

Most commentators on effective schools trace the origins of the subject to the 1966 study by James Coleman and his colleagues, the so-called Equality of Educational Opportunity Report (Coleman et al, 1966). This and a set of related studies at the time (Jencks et al, 1972) showed that:

. . . easily measurable differences (class size variation form 20 to 30 pupils, existing differences in teacher presence training, teacher experience and salaries, number of books in the library etc.) have little consistent relationship to student achievement (Purkey & Smith, 1983, p. 428) and that schools had little effect on students' achievement when compared to the effects of family background and socio-economic status. At about the same time, the Rand Corporation charged with the brief to examine 'what is known at present about the determinants of educational effectiveness' produced an even more pessimistic finding that 'research has found nothing that consistently and unambiguously makes a difference in student outcomes'. (Averch et al., 1972, p. x)

These research findings from the late 1960s raised what was to become an enduring question in the educational research community: Do Schools Matter?

What follows is a periodised characterisation of attempts by educational researchers and statisticians to address this fundamental question raised by Coleman and related studies during the 1960s and early 1970s.

Trends and Patterns in Effective Schools Research

There have been broad consistencies in the conceptual questions and methodological procedures pursued in the effective schools research since the 1960s. The following categorisations must therefore be read simply as an attempt to identify specific trends since the Coleman Report without suggesting that the categories are exclusive to any one period. However, there appear to be research emphases characterising each decade since the 1960s.

The 1960s and Early 1970s: large sample, quantitative studies

The first studies related to school effectiveness relied on large sample regression and correlational analyses of school inputs and outcomes. The Coleman study, for example, is based on a national survey of teachers, students and principals in approximately 4000 schools to examine school characteristics (e.g. physical facilities), staffing issues (e.g. teacher training) and student background (e.g. socio-economic status). As mentioned earlier, this research (Coleman et al., 1966; Averch et al., 1972; Jencks et al., 1972) generated a broad, generalised finding that student background characteristics were far more powerful in determining student achievement than any school-level factors.

Several critiques of and elaborations on this research formed the basis for what was to become known as the school effectiveness literature. First, it was pointed out that these studies (e.g. Coleman et al., 1966) measured resources available to the school and not how these resources were organised and used; that is,

. . . how well teachers and specialists co-ordinate their work together, how well teachers and students make use of the time available to them for instructional activities, and on how well teachers motivate their students and reinforce their efforts. (Cohen, 1982, p. 14)

Second, these studies have been described as limiting in that they focus on average achievement level thereby overlooking the fact that within schools there is a wide range of classroom achievement levels and that within classrooms there is wide variation in individual student achievement levels (Cohen, 1982, p. 14).

The Mid-to-late 1970s: refined large sample quantitative studies

Following the pessimistic accounts of school effects, a responsive set of studies attempted to re-examine the evidence based on 'methodological improvements that allowed [researchers] to be more sensitive to the relationship between school resources and the quality of education' (Clark et al., 1984., p. 45). Several commentators on this period are in agreement with Cohen (1982) that while much of the early research was not sufficiently sensitive to important things that happened to individual students within the school, the earlier research did provoke a sharpening [of] the strategies employed in subsequent studies to learn what about schools may make a difference. (p. 14)

Specific methodological strategies in this 'second wave' of school effectiveness studies used individual students as the unit of analysis, measured progress rather than achievement as an estimate of effectiveness and developed a more complex estimate of school resources and their delivery within classrooms (Clark et al., 1984, p. 45).

Richard Murnane (1981), in his review of this literature, concluded that 'schools matter' and that while 'there is no unequivocal consensus regarding the role of any school resource in contributing to school achievement,' he argued that:

a judicious interpretation of the evidence (including the research methodology as well as the pattern of coefficient estimates) does suggest some tentative conclusions . . . primary resources are teachers and students . . . Physical facilities, class size, curricular and instructional strategies can be seen as secondary resources that affect student learning through their influence on the behaviour of teachers and students. (p. 45)

Citing four studies (Hanushek, 1971; Murnane, 1975; Armor et al., 1976; Murnane & Phillips, 1979) using these improved quantitative methodologies, and in contrasting reference to the Coleman/Jencks research, Murnane (1981) asks:

What have we learned from quantitative studies of school effectiveness? The most notable finding is that there are significant differences in the amount of learning taking place in different schools and in different classrooms within the same school . . . even after taking into account the skills and backgrounds that children bring to school. (p. 20, emphasis added)

The Late 1970s to Early 1980s: checklists and case studies

Checklists. Starting with a landmark study by Ronald Edmonds (1979) on Effective Schools for the Urban Poor, a body of literature emerged at the close of the 1970s in the form of a summation, a set of general conclusions which describe the characteristics of 'effective schools' (D 'Amico, 1982, p. 6; see Brookover & Lawrence, 1979; Edmonds & Frederiksen, 1979; Rutter et al., 1979; Duckett et al., 1980).

Assuming that 'schools matter', this literature set out to describe the properties of 'unusually effective schools' often by comparing so-called outlier schools. The assumption was that by identifying the salient characteristics of effective schools, these could be transferred or replicated to other contexts in a relatively unproblematic manner.

The production of checklists, at a first glance, produced a range of 'effective school characteristics' which were both different and contradictory. Consider the comparative lists reproduced by D'Amico (1982) in Table 1 below.

The Edmonds (1979) research, often cited as a basic reference for 'checklist studies', lists five factors attributable to effective schools:

(1) strong administrative leadership;

(2) school climate conducive to learning;

(3) high expectations for children's achievement;

(4) clear instructional objectives for monitoring student performance; and

(5) emphasis on basic skills instruction.

But Austin (1981) produced 29 characteristics, Brookover & Lawrence (1979) identify 10 characteristics, Weber (1971) recommended 8 factors while others studies (such as the 1980 Phi Delta Kappa study) generate different properties associated with effective schools. Similar observations have led Purkey & Smith (1983) to conclude that:

. . . reviews do not always find the same features to be characteristic of effective schools, even when considering basically the same literature (p. 429),

and continue that:

. . . while all the reviews assume that effective schools can be differentiated from ineffectiveness, there is no consensus yet on just what the salient characteristics happen to be. (p. 430)

In sum, while this literature takes for granted the fact that 'schools matter' they proceed to identify those characteristics which explain 'what works' in effective schools.

Case Studies. Case studies have always featured as a methodology for conducting effective schools research after the large-scale quantitative studies of the 1960s. These case studies generally fall into two classes (identified by Ralph & Fennessey, 1983, pp. 690-691).

(a) comparative case studies -- such as Weber's (1971) study comparing 4 exemplary schools and subsequent studies such as that by Ellis (1975) which compared 10 exemplary schools with an equal number of ineffective schools serving similar groups i.e. students in poorer neighbourhoods.

(b) simple case studies -- such as the well-known Phi Delta Kappa (1980) study addressing the question 'why do some urban schools succeed?' Individual successful schools, identified by public reputation, were isolated for in depth study to examine 'what works' and to offer explanations for success.

Some of these case studies formed the basis for the production of checklists (Brookover & Lawrence, 1979) but others simply generated non-prescriptive detailed ethnographic 'portraits' of 'good schools' (Lightfoot, 1983).

Case study methodologies have also generated sustained critique, the most comprehensive by Purkey & Smith (1983) which is worth citing at length:

. . . while each case study has its particular strengths and weakness, as a group they generally share the five weaknesses: small and unrepresentative samples, possible errors in identifying effective schools because of uncontrolled student body characteristics such as social class, achievement data aggregated at the school level, inappropriate comparisons . . . and the use of subjective criteria in determining school success. (p. 433)

Similarly, Ralph & Fennessey (1983) identify 'Three problems that crop up persistently in these (simple case) studies':

observer bias, the paucity of verifiable evidence for empirical claims, and the lack of control variables. Observer bias applies both to the reliability of classroom observations and to the identification of exemplary schools. (p. 691)

The significance of these case study methodologies of the 1980s is that they injected strong qualitative components into the school effectiveness literature which provided the in-depth ethnographic details of classroom life often lost in large scale statistical investigations.

The Late 1980s and Early 1990s: refined methodologies, renewed critiques, refocused agendas

By the early 1990s it was clear that the effective schools research had entered a cycle of 'research -- critiques of limitations -- improved research' without any critical new departures in this body of literature. Each successive research endeavour is an attempt to 'rectify' methodological limits in previous research or to 'test' hypotheses of existing research. In the main, this research employs increasingly sophisticated statistical procedures on large sample

studies-reminiscent of the Coleman studies era (Aitkin & Longford, 1986; Goldstein, 1987; Odden, 1990; Witte & Walsh, 1990). The assumption seems to be that by increasing the methodological sophistication of the quantitative research, it would be possible to 'get it right'.

At the same time, the more recent research was yielding increasingly pessimistic findings on the overly positive -- some would say evangelical -- research of the previous generation (1970s-1980s) of school effectiveness studies. Zirkel & Greenwood (1987) simply echoed this pessimistic note from other assessments by concluding that:

In the light of the marked limitations of the early research and the mixed effects of the more recent research, broad characterisations . . . are premature overstatements. (p. 266)

Similarly, Odden's (1990) work on class size and achievement judged that:

System-wide class reduction would have little effect on student performance and even if it did, would cost too much money. (p. 224)

It is fair to conclude that effective schools research has reached a definite cul-de-sac in the 1990s placing the research agenda exactly where it was left by Coleman and others 30 years earlier, i.e. that schools have limited effects on student performance.

Why has the effective schools industry fallen on such hard times? Why are so many schools still 'ineffective' or 'mediocre' rather than 'unusually effective'? There are many reasons for this cul-de-sac in effective schools research, one of which was identified by Purkey & Smith (1983):

It is one thing to demand that all schools be effective; it is an entirely different matter to assume . . . that what has positive effects in one setting will invariably have the same effects in another. (p. 439)

Furthermore, the compelling logic of effective schools has propelled this literature into policy-making and decision-making ahead of a careful scrutiny of the findings. As Ralph & Fennessey (1983) correctly charge:

The significance of the effective schools research lies more in the ideology underlying it than in the validity of the empirical support for the idea that schools can lessen the effects of race and social class on academic achievement. (p. 693)

But this represents only a small part of the explanation for the failure of effective schools research. The thesis of this paper is that the theoretical and methodological perspective of this research is fundamentally flawed, beyond the litany of critiques summarised in the next part.

Common Criticisms of the Effective Schools Research

Criticisms of the effective schools literature abound, ranging from detailed methodological critiques (Purkey & Smith, 1983) to assessments of the ideology underpinning 'the effective schools model' (Ralph & Fennessey, 1983). Most critiques, however, have been supportive, offering only 'cautionary notes' to an otherwise positive assessment (Cuban, 1983; Rowan et al., 1983).

Summarised, the main lines of criticism are the following:

(1) Sample bias -- many studies are based on a small number of schools, often urban and elementary.

(2) Definitional concerns -- various authors employ varied and competing definitions of 'effectiveness', making comparison of findings difficult; some concepts, such as 'school climate', are simply too difficult to operationalise with attendant problems of measurement and comparison.

(3) Outcome measures -- most studies have focused narrowly on 'basic skills achievement' on standardised tests as the sole indicator of effectiveness, ignoring the range of other school effects and the more complex processes of schooling not examined in 'input-output' studies of school effectiveness. In addition, researchers often use 'subjective criteria' for determining school success.

(4) Control for background characteristics -- many studies focus only on school-level variables and ignore the intercorrelation between student background characteristics and school outcomes.

(5) Inappropriate comparisons -- many studies compare 'outlier schools', that is, unusually effective and ineffective schools at opposite ends of the spectrum. Yet most schools are 'average' and therefore constitute a more appropriate point of comparison.

(6) Methodological limitations -- many studies, particularly qualitative investigations, are described as 'anecdotal descriptions' or having a 'journalistic style of analysis' In the words of Purkey & Smith (1983):

the new school effectiveness literature . . . is weak in many respects, most notably in its tendency to present narrow, often simplistic, recipes for school improvement derived from non-experimental data. (p. 427)

(7) Aggregation of achievement data -- many studies use an 'average' score for school-level data, thereby mixing the wide variation within schools (or even within classrooms) for different groups or subgroups of students

(8) Levels of analysis -- many studies have not recognised the multi-level nature of schooling (individual student, teacher, classroom, school, district/province) and the impact of such 'embedded' factors on any level of academic performance.

(9) Observer bias -- many researchers set out with a prior ideas or assumptions of what constitutes an effective school; others rely heavily on nominations of exemplary schools without 'corroborating a schools reputation with objective data' (Ralph & Fennessey, 1983, p. 689).

(10) Theoretical weaknesses -- many studies are good at listing characteristics of unusual schools but few provide coherent theoretical accounts of how individual factors interplay within the organisation and culture of the school.

(11) Problems in causal ordering -- many studies assume that school effectiveness variables (such as 'high expectations') cause exceptional performance when in fact such variables may simply be a consequence of school success.

In addition to the standard criticisms of effective schools research, another important element in understanding this literature is the way in which the research is organised (or clustered) and the different terms and concepts used in reporting the findings.

Clustering of Effective Schools Research

For the purpose of a review, it is important to distinguish the broad concepts used in the school effectiveness literature, since different authors employ the same concepts in somewhat different ways and contexts.

Clark et al. (1984) divide the corpus of literature into 'two lines of inquiry':

(A) The literature on 'instructionally effective schools' (IES) which has as focus a measure of student achievement.

(B) The literature on 'school improvement' (SI) which focuses on the extent to which a school adopts an innovation.

In the former case (IES), the question is whether altering resources, processes, and organisational arrangements will affect student outcomes. In the latter case (SI), the issue is whether schools can change and, if they can, how they do it. (p. 42)

A different way of clustering this literature is pursued by Purkey & Smith (1983) who distinguish four groups:

(A) Outlier studies -- these studies distinguish highly effective (positive outliers) and highly ineffective (negative outlier) schools.

(B) Case studies -- these studies offer detailed descriptions of small samples of schools or individual schools.

(C) Program evaluations -- these studies assess existing programs in order to explain school-level performance related to these programs.

(D) 'Other studies' -- these studies, also cited in the school effectiveness literature, do not fit the above three categories and cover a range of interests e.g. comparing private and public schools.

Yet a third categorisation is provided by Ralph & Fennessey (1983) who distinguish:

(A) The study of effective schools -- these studies focus on schools and important differences among them.

(B) The study of school effects -- these studies focus on school- and classroom- level variables that have an 'effect' on student achievement.

And finally, a fourth approach to desegregating this literature comes from a 1984 Northwest Regional Education Laboratory Study titled, 'Effective Schooling Practices: a research synthesis'. This study identifies six components of the 'research base' on effective schooling:

(A) School effects research -- studies of the school to identify practices that help students learn (contrast this definition with that provided by Ralph & Fennessey, 1983).

(B) Teacher effects research -- studies of effective teaching practices.

(C) Research on instructional leadership -- research on principals and effective support of teaching and learning from the school administration.

(D) Curriculum alignment research -- studies of effective methods of organising the curriculum.

(E) Program coupling research -- studies of practices at different levels in the educational system.

(F) Research on educational change -- studies of practices that promote change in schools or programs on a sustainable basis.

This brief survey of approaches to clustering the research is valuable in that it illustrates (i) the use of different, concepts (and language) to explain the same educational events; (ii) the emerging patterns of research in an otherwise amorphous mass of effective schools research; and (iii) the danger inherent in drawing on studies without determining the meanings assigned by different authors to the events being studied.

But the most important language issue of concern is the label effectiveness and its relationship in the literature to associated concepts such as efficiency.

Concepts in School Effectiveness Studies

By now it should be clear that different authors on the subject use the term 'effectiveness' in many different ways. In D'Amico's (1982) review he found definitions which ranged:

. . . from percentage increases in reading aptitude [Edmonds & Frederiksen, 1979], to simultaneous increases and decreases in maths and reading scores [Brookover & Lawrence, 1979], to passing grades on national comprehensive examination [Rutter et al, 1979] to a pot pourri of school determined, standardised, and curriculum specific test results. (Phi Delta Kappa, 1980, p. 8)

One of the most useful efforts to untangle the effectiveness-related concepts in this literature was recently provided by Don Adams (1993) whose primary concern is the concept of education quality with a particular focus on international education research. Adams (1993) distils from the literature the following terms and their uses:

(1) Quality as resource inputs
    textbooks per student
    teacher qualifications
    teacher:student ratio

(2) Quality as outcomes/outputs
    academic achievement (test scores)

personal income
progression/pass rates

(3) Quality as processes
teacher-student interaction
levels of learner participation
engagement in learning

(4) Quality as content
contemporary/cutting-edge content e.g., integrated studies
coverage of the basics

(5) Quality as reputation
general public perception
historical image

(6) Quality as value-added
influence on overall development of the student/students

Having reviewed the extensive literature on effective schools (primarily) in the US, it is time to state the central thesis of this review. In its theory language design, methods and conclusions, the effective schools literature works strictly within a positivist paradigm which assumes that schools basically consist of interrelated units which can be 'fixed' by applying the right mix of policy and resource inputs which would result in greater effectiveness. With few exceptions (Dantley, 1990), the so-called 'critical reviews' have engaged this literature on the same functionalist terms within which the original literature has been framed. Typical of this position is the criticism of the research levered by Purkey & Smith (1983) as '. . . recipes for school improvement derived from non-experimental data' (p. 427). Other theoretical, epistemological, and methodological perspectives on changing schools are effectively (sic) silenced in this literature. As a consequence, our understandings of the nature of schooling and the problem of change have

been limited. An alternative research model is required. However, an important caveat: this critique does not assume that schools cannot be changed or that schools are institutions that are 'determined' by political or economic forces beyond the reach of practitioners or policy-makers (Dantley, 1990). Rather, the argument suggests that existing theoretical and methodological procedures limit understanding of change. But before outlining the alternative, we now examine and assess the cross-national transfer and application of these findings in the developing world.

The Transnational Character of Effective Schools Research

The proposition that the knowledge produced through research functions as a transnational exchange (in same way as capital) from 'First' to 'Third' Worlds is not novel (Kumar, 1979; Weiler, 1989; Jansen, 1991). What remains striking, however, is the intensity with which the Anglo-American research on effective schools was replicated in the developing world despite enormous context differences.

In this part we review dominant trends in transnational research applications in developing countries, and assess the limitations of this corpus on effective schools in Third World settings.

Trends in Transnational Research on Effective Schools

Research on schools has made its journey from the West into developing countries through three primary 'carriers':

(a) international funding agencies, such as the World Bank and USAID, and their research or consultancy teams;

(b) international research associations, such as the International Association for the Evaluation of Educational Achievement (IEA);

(c) individual researchers, often graduate students from the West, conducting doctoral research or specially-funded investigations in developing countries.

However, the World Bank studies have by far been the most influential in Third World educational policy systems.

By the start of the 1970s, at least 14 major studies of school effects were already completed in the national education systems of developing countries (Simmons & Alexander, 1978). Barely a decade later, another 26 national studies were identified for review in developing states (Schiefelbein & Simmons, 1981). Given the paucity of research in developing countries, and the costs associated with large-scale studies, these were impressive accomplishments -- characterised by three important directions. First, and without exception, these studies were modelled on the methodologies of the Coleman Report using national survey data, cast in multivariate statistical techniques which link 'determinants' (such as resource, school buildings, teachers, etc.) to certain achievement patterns among students, and informed by the concept of 'production functions' with its origins in economics. Second, early research in developing countries was interpreted as 'consistent' with US studies (Coleman et al., 1966) which indicated that 'student backgrounds markedly affect their achievement'. And third, these studies were all designed and funded in the US (with a minor contribution from the UK), transferred to developing countries (mainly in Latin America) by individual researchers and research institutions form the West, and imposed as a research agenda on countries barely emerging from the end of colonial rule. Table II below illustrates a subset of the earlier studies in developing countries:

By the 1980s, a second generation of effective schools research matured in developing countries, using more sophisticated statistical techniques and financed almost exclusively by a single institution, the World Bank. While studies in the 1970s showed that schools in the Third World had little influence on achievement (Simmons & Alexander, 1978) subsequent research 'suggests that the school institution exerts a greater influence on achievement within developing countries compared to industrialised nations, after accounting for the effect of pupil background' (Heyneman & Loxley, 1983; also, Fuller, 1987, pp. 255-256).

The task of this second generation of research was to identify which school factors were stronger determinants of achievement and therefore better 'investments' in developing countries. As demonstrated in Tables III and IV below, the single most important finding to emerge from this research is the significance of textbooks and other 'material inputs' as factors in explaining school achievement. Study after study from the World Bank worked within a methodology which drew the same conclusion: textbooks matter (Heyneman et al., 1981; Fuller, 1987; Lockheed & Vetspoor, 1991).

By the end of the 1980s a third generation of effective schools research emerged which criticised statistical deficiencies of 'single-level regression models' in which important variations between students and classes of students are lost in 'aggregated data' (Riddell, 1989). Drawing on the influential work of Harvey Goldstein (1987), these researchers argued for the application of multilevel models which

. . . are unique in being capable of analyzing data simultaneously at different levels of the educational hierarchy--at the pupil level, the level of the classroom, and the level of the school . . . (Riddell, 1989, p. 488)

Less prolific, and certainly less well funded than the World Bank Research of Heyneman, Fuller and others, research on multilevel modelling techniques remained limited to a few individual researchers (Riddell, 1988). It is important to note, however, that the Riddell critique argues within the effective schools paradigm; it searches for statistical improvements on an existing model of research on schools (Riddell, 1989; Riddell & Nyagura, 1991; Nyagura & Riddell, 1992).

Southern African states have not been immune to the effective schools research agenda. Three examples are often cited in the literature.

Botswana was an early candidate for studies modelled on the Coleman Report and later research (Kann, 1978; Loxley, 1984). Botswana was also one of the first African countries to host a Symposium on School Effectiveness Research in 1990 (Yoder, 1990).

Zimbabwe was another fertile arena for studies of school effectiveness. By the mid-1970s there was already a local research study showing the insignificance of student's economic status for predicting academic achievement (Dorsey, 1975). On the other hand, more recent studies, employing multilevel methodologies, made the reverse argument viz. that

the influences which have moulded a child before he or she reaches secondary school constitute more significant influences on the child's academic achievement than factors to which the child is exposed in the secondary school classroom. (Riddell, 1988, 1989).

There has been little sustained debate on this topic in the Zimbabwean literature. Nevertheless, in January 1992 in Gweru, Zimbabwe, senior Zimbabwean educators developed performance indicators which would be used in planning and assessing the effectiveness of rural schools in Zimbabwe (Heneveld, 1993, p. 74).

South Africa, in part because of its isolation from participation in international research initiatives, did not participate in Coleman-type research during the 1960s and 1970s. However, South Africa recently gave birth to a range of studies on school effectiveness and educational efficiency. These studies are by no means coherent in either ideology or method. Some reports are at pains to celebrate ethnic nationalism and technological applications as the answer for 'mediocre, low-achieving black schools' (Jacobs, 1991). Other studies are assessments of self-reports by principals of school effectiveness (Carrim & Shalem, 1992). Yet a third set of studies reviews the relationship between academic achievement and educational efficiency (Chetty, 1992). And, perhaps in part as a result of recent political changes, South Africa is currently participating in new IEA studies on achievement. Despite these disparate strands in the South African literature, there exists for the first time an attempt to examine seriously what happens inside classrooms as the basis for policy and planning.

Beyond Effective Schools?

The thesis of this review is simple: studies of effectiveness and studies on quality represent competing and incompatible agendas for school and classroom-based research. Writings which seek reconciliation among these two research approaches (Adams, 1993) ignore the fact that the concepts have their origins and root their assumptions in radically different understandings of what constitutes good (or poor) educational practice. The following table demonstrates fundamental differences between these two approaches:

School Effectiveness	School Quality
(1) Origins in economics, using the production function model	(1) Influenced in part by anthropology, descriptive procedures
(2) Studies the effects of a set of inputs (e.g. textbooks) on a specified output (e.g. student achievement)	(2) Studies school and classroom-level processes and their interactions, and the impact on achievement
(3) Utilises large-scale statistical methods e.g. multiple regression models to 'determine' the relative effects of different inputs on achievement	(3) Uses ethnographic instruments, adapted for particular contexts e.g. interviews, observation schedules, questionnaires etc.
(4) Results are often aggregated for a large number of schools offering generalisations across contexts	(4) Results often specified for particular schools or classrooms, through generalisations are also sought across schools and classrooms

There is a growing dissatisfaction with the effectiveness paradigm (Thiesen et al., 1983). Recently, researchers have posited organisational models of student achievement (Rosenholtz, 1989), 'culturally situated model(s) of school effectiveness' (Fuller & Clarke, 1993), contextual models of effectiveness (Hannaway & Talbert, 1993), and process models for explaining achievement (Lockheed & Komenan, 1989). The production function model has slowly, though certainly not completely, been challenged in terms of its core assumptions about the nature of education, schooling and classroom processes.

Fuller & Clarke (1994), for example, take aim at what they call 'the policy mechanics' who:

seek universal remedies that can be manipulated by central agencies and assume that the same instructional materials and pedagogical practices hold constant meaning in the eyes of teachers and children from diverse cultural settings. (p. 119)

In response, their cultural model of school effectiveness promises to unravel the meanings, norms and patterns of socialisation in the classroom.

Lockheed & Komenan (1989), on the other hand, also announce the limits of production function studies and then introduce concepts such as 'teaching quality' and 'teaching processes' to mark a shift towards studying what happens inside classrooms.

Both sets of studies signal the beginnings of a discontent within the same community which only recently still advocated input-output models of school effectiveness through the 1980s. It is not an easy shift, one marked by contradictions. For example, Fuller & Clarke (1994), fall into the trap of assigning cultural (and therefore educational) homogeneity to entire African states so that 'teachers in Soweto' are marked different from their counterparts 'elsewhere in the Southern African region'. A closer examination would have shown that within Soweto there are myriads of expressions of teaching and learning processes depending on factors such as levels of political disruption, degree of community participation, spatial location of the

school (township versus informal settlement schools, for example), exposure to training and support from non-governmental organisations and so forth (Carrim & Shalem, 1994).

Lockheed & Komenan (1989) show promise of moving beyond production functions only to operationalise education quality concerns within a slightly modified regression analysis model. 'Quality' and 'process' are simply additional variables to be inserted into a multiple regression calculation.

Clearly, in many circles education quality is still conceptualised within the epistemological and methodological shadows of its predecessor, educational effectiveness. However, there is a small but discernible literature which takes as its starting point the understanding of education quality as concerned with (1) processes of teaching, learning, testing, managing and resourcing which must be (2) investigated on its own terms, i.e. through in-depth qualitative investigations of such processes, and (3) drawing more deliberately on insider perspectives of what happens inside schools and classrooms (Prophet & Rowell, 1990; Sato, 1990; Ntshingila-Khosa, 1994).

One of the most significant documents reflecting the emerging paradigm of education quality as school- and classroom-level processes comes from within the World Bank and is entitled 'Research into Practice: Guidelines for Planning and Monitoring the Quality of Education in Sub-Saharan Africa' (Heneveld, 1993). This document argues for a revision of current assumptions informing methods of policy and planning, towards a new approach which recognises:

(1) that operations within school and classrooms . . . are to a large extent independent of national policy;

(2) that the educational process in individual schools contributes significantly to the effectiveness of education; and

(3) that (school-level) factors are not independent but come together within the school to form a social system that conditions the learning that can take place there. (Heneveld, 1993, p. 6)

It remains to be seen whether the Heneveld proposal on quality translates into large-scale funding of school-level research and investments comparable to the effectiveness agenda which dominated the decade of the 1980s. Nevertheless, this paper signals a substantive research shift in the thinking of some World Bank researchers which accords with developments elsewhere in the educational research community.

One country in which there has been an explosion of education quality research within this emerging paradigm is South Africa. Individual researchers are increasingly concerned with the processes of teaching, learning, testing, managing and resourcing at the school- and classroom levels (Carrim & Shalem, 1994; Dlamini, 1994; Ntshingila-Khosa, 1994; O'Neill, 1994; Perrold et al., 1994; Sullivan, 1994). Major in-country literature reviews argue specifically for an approach to the study of schooling which moves beyond the effectiveness paradigm and examines the processes, qualities and cultures of school and classroom life (Chetty, 1993; Jansen, 1994; Meyer, 1994a, b). A recent national conference in Cape Town (March 1994) brought together seven large-scale school effectiveness/quality projects which suggested that extensive studies in classrooms were likely to emanate from South Africa. And a host of large non-governmental organisations (NGOs) in South Africa have defined their research and evaluation tasks as investigating education quality and its link to improving classroom practice and policy direction under a democratic system of government [2].

Another significant development is the advent of an international research project, Improving Education Quality (IEQ), funded by the United States Agency for International Development (USAID). IEQ offices have been established in five developing countries viz., Mali, Ghana, Gautemala, South Africa and Uganda, with the following objectives:

(1) to understand the processes through which classroom interventions in different countries influence student performance;

(2) to demonstrate a process whereby classroom research on improving education quality is integrated into the educational system; and

(3) to create opportunities for dialogue and partnership among researchers and educators who are seeking to improve educational quality at local, regional, national and international levels.

Similar research initiatives have been launched in South Africa through organisations such as the Education Foundation (Ngeleza & Dladla, 1994), the Education Policy and System Change Unit, or EDUPOL (Maja, 1994) and the various university-based Education Policy Units (EPUs). Another recent research initiative is the 'Profiles of Learning' study which places teachers at the centre of the research into the quality process (Johnson, 1995) Also, central to the policy development work of the Centre for Education Policy Development (CEPD), a policy think tank initiated by the African National Congress, is a proposal for a comprehensive Education Quality Improvement Programme (EQUIP). EQUIP has already been developed through the work of EDUPOL in the capital of Guateng province, South Africa.

Finally, the educational research community, in both Third and First World contexts, has started to criticise the homogenising tendencies of large-scale studies and to draw attention to the complexities, unpredictabilities and uniqueness of classrooms settings even within the same countries (Thiesen et al., 1983; Sato, 1990; Hannaway & Talbert, 1993). Clive Harber (1992) is not alone in his assessment that:

despite a mountain of published writings on education, we still know relatively little about the everyday reality of schools and in particular how key actors carry out their roles. (p. 162)

Informed by extensive studies on implementation, researchers (McLaughlin, 1991) are also calling for a shift towards understanding the 'why' and 'how' of implementation at the classroom level rather than simple quantifiable outcomes i.e. the 'what' and 'how much' of conventional implementation studies (Odden, 1991).

To conclude: this paper assessed the trends in effective schools research largely within the North American literature, reviewed the transnational impact of the effective schools paradigm with specific attention to developing

countries, and outlined the beginnings of an alternative approach to schools which takes as its starting point the complexities of what happens inside classrooms rather than simple input-output analyses of schools associated with earlier approaches.

The success of the effective schools paradigm depended not only on the development of a coherent research agenda by academics, and the support of practitioners for adopting such an agenda for implementation, but also on the generation of large-scale funding support from international development agencies. The education quality paradigm will require nothing less if it is to make an impact on education practice in schools and classrooms of the global education system.

NOTES

[1] It is noteworthy that even in these early studies initial differences were emerging which suggested that: 'combined "school effects" . . . sometimes outweigh the non-school effects on achievement'.

[2] Recent developments in Botswana also promise further classroom studies using observational instruments and other qualitative measures of performance and quality (Snyder & Nagel, 1988; Prophet & Rowell, 1990; Snyder & Fuller, 1991).

TABLE 1

Illustration 1

Term

Definition

Improving schools Brookover & Lawrence (1979)

Schools which between 1974 and 1976 showed an increase of 5% or more of fourth grade students who could master at least 755 of the objectives tested by a math and reading test while simultaneously showing a 5% decrease in the ones who could only master less than 255 of the same objectives

Effective schools Edmonds & Frederiksen (1979)

Schools where more than half of the sixth grade students scored at or above the 75th percentile on a verbal aptitude test

Exceptional schools Phi Delta Kappa (1980)

Schools that showed a positive change in any one or a combination of: Student achievement; student attitudes towards school or themselves as learners; community/parent attitudes toward school

Illustration 2

Characteristics

Brookover & Lawrence (1979)

- Improving schools accept and emphasise the importance of basic skills mastery as prime
- Staff of improving schools believe all students can master the basic skills objectives and they believe the principal shares this belief;
- Staff of improving schools believe their students will go on with their eduction;
- Staff or improving schools do not make excuses: they assume responsibility for teaching basic skills and are committed to do so;
- Staff of improving schools spend more time on achieving basic skills objectives;
- Principals at improving schools are assertive instructional leaders and disciplinarians, and they assume responsibility for the evaluation of the achievement of basic skills objectives;

Edmonds (1981)

- Clarity that pupil acquisition of the basic school skills takes precedence over all other schools activities;
- A climate of expectation in which no children are permitted to fall below minimum but efficacious levels of achievement.

- Strong administrative leadership without which the disparate elements of good schooling can be neither brought together nor kept together;
- Presence of a means by which pupil progress can be frequently monitored;
- An atmosphere that is orderly without being rigid, quiet without being oppressive, and generally conducive to the instructional business at hand.

Phi Delta Kappa (1980)

- Successful schools are characterised by clearly stated curricular goals and objectives;
- The leaders attitudes toward urban education and expectations for school for program success determine the impact of the leader on exceptional school;
- The behaviour of the designated school or program leader is crucial in determining school success;
- Successful urban schools frequently employ techniques of individualised instruction;
- Structured learning environments are particularly successful in urban classrooms;
- Reduction in adult/child ratios are associated with positive school performance;
- Successful schools are often supported with special project funds from federal, state and local sources;
- Successful urban schools are characterised by high levels of parental contact with the school and parental involvement with school activities

TABLE 2. Description of systems studies explaining student cognitive achievement in Africa

		Sample			
Author(s) and publication date	**Country**	**Primary or lower secondary grade**	**Upper secondary grade**	**Range**	**Measure of student achievement**
Youndi 1971	Congo	-	1450 students in grade 11 and 12 randomly selected from 25 secondary schools		Individual scores on IEA multiple choice tests in French and Mathematics
Simmons 1972	Tunisia	44 students from village and 80 students from an urban suburb, grades 4-8			Individual scores on multiple choice tests in Arabic, French and arithmetic
Thias & Carnoy 1973	Kenya	3405 rural grade 7 students in a random sample of 89 schools	-	-	Average student scores on Kenya Preliminary Examination for each school
				Grade 11 students in 115 rural and urban schools	Average student scores on Cambridge School Certificate Examination for each school
Carnoy & Thias 1974	Tunisia	6195 students in grades 7-11 randomly selected from rural and urban secondary schools		-	Individual student grade point averages on school examinations
Heyneman 1975 (data 1972)	Uganda	2293 grade 7 students in 67 schools		35	Individual scores on Uganda school selection exams in English, Mathematics and general knowledge

The statistical procedures for these studies were all ordinary least squares procedures.

Adapted from Schiefelbein & Simmons (1981, p. 17).

TABLE 3. What school factors boost achievement in the Third World?

School factor	Number of studies	Number confirming achievement effect
Highly effective:		
Textbooks and instructional materials	24	16
Years of teacher training	31	22
School library activity	18	15
Length of instructional programs	14	12
Pupil feeding programs	6	5
Less effective:		
Reducing class size	21	5
Science laboratories	11	4
Teacher salaries	14	5
Pupil repetition of grades	5	1

Source: Fuller & Heyneman (1989, p. 16).

TABLE IV.

Study	Country	School inputs, teacher attributes, pedagogical practices assessed
Primary school studies Glewwe et al. (1993)	Jamaica	School inputs, pupil tests, time in school, classroom activities, gender effects
Haitaian Foundation (1991)	Haiti	Instructional time, teacher preparation in-service training
Harbison & Hanushek (1992)	Brazil	Textbooks, exercise books, facilities, teacher training, subject matter knowledge, multigrade classrooms, salaries, class size
Johnson (1992)	Swaziland	School library facilities, instructional time, school size, textbooks, desks, teacher training
Lockheed (1991)	Nigeria	Complex use of teaching materials, class size, teacher gender, testing of pupils
Lockheed et al. (1988)	Philiphine	Class size, school size, teacher training, use of science lab, group work, pupil asessment
Mullens (1993)	Belize	Teacher training and prior achievement of teachers
Nyagura & Riddell (1992)	Zimbabwe	Textbooks, teacher gender, age, training level, planning time, class size, instructional time, teacher experience

Source: Adapted from Fuller & Clarke (1994). p.148.

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