The state of South African schools Part 1: Time and the regulation of consciousness

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Introduction

The very low value for money provided by the South African schooling system has become well known in the 15 years since the fall of apartheid. Unfortunately, how to improve the quality of schooling is far less clear, despite the activities of NGOs and donors, both international and local, directed toward this end for well over two decades, and of government since 1994. The starting assumption of the present paper is that weaknesses at every level of the system – classroom, school and administrative structure – contribute to the crisis in schooling. The purpose of the paper is to identify the key problems which occur at each of these levels, as a prerequisite for designing more effective school improvement interventions.

The evidence on which this analysis is based varies from strong, generalisable data derived from representative national surveys, to small scale descriptive studies based on a handful of classrooms. Much of the data, therefore, despite the ring of authenticity it may have for anyone who has spent time in South African schools and classrooms, requires verification before it can serve as the basis for a firm national picture. Nevertheless, it illustrates the range of considerations which need to go into the design of any reform effort.

Learner performance

The poor performance of South African schools compared to those in both developed and developing countries has been established at primary level in mathematics and reading (Moloi and Strauss, 2005; Howie, Venter, Van Staden, Zimmerman, Long, Scherman and Archer, 2007) and at secondary level in mathematics and science (Howie, 2001; Reddy, 2006; see also Taylor,

Fleisch and Shindler, 2007). The SACMEQ[1] scores for mathematics at Grade 6 level starkly illustrate the point (Table 1). These figures are important for at least two reasons. Most obviously, they show that South Africa is outperformed by eight surrounding countries, many of which, including Mozambique, Kenya, Uganda and Tanzania, are much poorer, with gross domestic products in the order of one-tenth to one-fifth of South Africa's. This is a demonstration of the lesson that, while in general, poverty is strongly associated with performance, many school systems achieve higher quality with far fewer resources than South Africa has.

A second reason why the patterns shown in Table 1 are important arises from an analysis of the maths scores by quintile. Even amongst the richest 20 per cent of schools (quintile 5), South Africa is outperformed by Mauritius and Kenya, and in all the other quintiles the South African mean scores fall below those of the SACMEQ all-country means. Clearly, a culture of complacency and low expectation permeates the entire South African system, including those schools which were privileged under apartheid and which continue to enjoy levels of resourcing well in excess of those which pertain in the majority of schools.

Table 1: SACMEQ II scores for Grade 6 math, 2000

QUINTILE	1	2	3	4	5	Mean
Botswana	491	499	510	508	557	**513**
Kenya	540	545	555	565	611	**563**
Lesotho	443	448	448	445	452	**447**
Malawi	422	427	435	433	447	**433**
Mauritius	519	564	587	620	640	**584**
Mozambique	526	525	531	530	538	**530**
Namibia	403	402	411	425	513	**431**
Seychelles	520	541	555	576	579	**544**
South Africa	442	445	454	491	597	**486**
Swaziland	506	511	511	513	541	**517**
Tanzania	484	511	529	528	560	**522**
Uganda	484	497	498	509	543	**506**
Zambia	414	425	436	434	466	**435**
Zanzibar	478	472	478	479	484	**478**
Mean	**468**	**480**	**485**	**492**	**560**	**468**

Source: Van der Berg and Louw, 2006a

[1] Southern and Eastern African Consortium for Monitoring Education Quality.

Table 2 shows the relative performance of South African high schools in 2004, indicating that some 80 per cent of schools are highly ineffective, producing only 15 per cent of higher grade (HG) passes in mathematics in the Senior Certificate (SC) examinations, compared with 66 per cent produced by only 7 per cent of the country's top performing schools.

Table 2: Distribution of high schools by performance in Senior Certificate mathematics, 2004

	Formerly privileged*	African	Total	Proportion of total	*Proportion of HG math passes*
Top performing**	380	34	414	7%	***66%***
Moderately performing	254	573	827	14%	***19%***
Poor performing	600	4 277	4 877	79%	***15%***
Total	1 234	4 884	6 118		

* Under apartheid these schools were administered by the House of Assembly (for whites), House of Representatives ('Coloured') or House of Delegates (Asian)

** Top performers produce at least 30 maths passes in the SC examination, with at least 20 per cent at the higher grade (HG); moderately performing schools produce at least 30 maths passes, mostly at standard grade (SG), while poorly performing schools fail to achieve 30 passes in maths.

Source: Simkins, 2005

Table 2 also holds two main lessons. First, there are massive disparities in performance between schools within the South African system, to a large extent structured by a history of poverty and deprivation, with African schools overwhelmingly represented in the poor performing category. Indeed, South Africa has the highest levels of between-school inequality[2] of performance in both mathematics and reading, by a large margin, among SACMEQ countries (Van der Berg, 2005). The point is emphasised by disaggregating Grade 6 reading scores in the Western Cape (Table 3), which are assessed in all schools in the province every two years.

[2] As measured by the intraclass correlation coefficient rho (ρ), which expresses the variance in performance between schools as a proportion of overall variance.

Table 3: Western Cape literacy pass rates for Grade 6 by former department, 2003 and 2005

Ex-Dept	Year		% Distribution of learners by Ex-Dept	
	2003	2005	2003	2005
CED	82.9	86.9	20.1	21.2
DET	3.70	4.70	13.6	14.3
HOR	26.6	35.5	65.8	64.2
Total Province	**35.0**	**42.1**	**100**	**100**

CED: Cape Education Department; DET: Department of Education and Training; HOR: House of Representatives

Source: WCED Grade 6 Learner Assessment Study, 2003 and 2005, quoted in Fleisch, 2008.

The results powerfully illustrate the scale of the achievement gap. While more than four out of five children in former white schools are reading at the appropriate level, as defined by the national curriculum, the figure, while improving, was less than half in former Coloured schools, and in former DET schools only four children in a hundred read at grade level (Fleisch, 2008).

However, the second lesson to be drawn from Table 2 discerns a secondary pattern superimposed on the fundamental association between poverty and performance. This is a pattern which challenges a principal conclusion of Coleman's (Coleman, Campbell, Hobson, McPartland, Mood, Weinfeld and York, 1966) famous study, that schools cannot make a significant difference to pupils' lives because of the overriding effects of socio-economic status on school success. Table 2 shows that 14 per cent of African schools are classified as top- or moderately performing, defying their history of discrimination and deprivation. The findings by Christie, Butler and Potterton (2007) that pass rates in the SC exam show the full range of variation from 0 per cent to 100 per cent in schools classed in all five poverty quintiles, with the exception of quintile 5 where the lowest placed school achieved a rate of 4 per cent, provide a different route to the same conclusion: there is no deterministic relationship between performance and financial resources. This is not to imply that there is no threshold of poverty below which no school can operate effectively, nor that increased levels of resourcing are not generally associated with improved performance, nor is it in any way an argument to reduce spending on schools; rather, it is to emphasise that most South African schools can do far more with the resources at their disposal than they currently do.

The South African school sector can be characterised as a high cost, high

participation, low quality, low equity system (Taylor, 2007). What are the factors which result in such poor performance relative to other countries and in such massive disparities within-country? Both the poor comparative performance and the within-country inequities are, of course, traceable back to a history of 350 years of colonial selective development, exacerbated by the policies of systematic discrimination and isolation pursued between 1948 and 1994. The last 15 years have demonstrated just how difficult and slow it is to transform the school system, despite very thoroughgoing structural change. We pursue the argument below that the key to improved performance lies in fostering a culture of professional responsibility at all levels of the system, and that this task involves both a cultural sea change, and a technical dimension which would combine the use of focused accountability systems and professional development programmes. But first we examine the contributing causes of poor performance in the domains of school leadership and management, and teachers and teaching.

Learner performance in written tests is the dependent variable of schooling. A key research project is to identify the levers likely to improve performance. We address this task in three parts. Part 1, the present paper, discusses the role of *time* in the life of schools, and how the framing of time within the school shapes the consciousness of young citizens. The second part of this discussion looks at *text* and its role in the communication of knowledge in classrooms. Part 3 examines *knowledge* itself, the stuff that schools reproduce and recontextualise, and how teachers' orientation to knowledge shape their professional habitus. But first we outline some theoretical considerations which frame this discussion.

Theory

The debate about schooling is such a fraught area, beset with conflicting languages and ideologies, that it seems wise to start any discussion on schooling by explicating the terms we will use. Data on schools and schooling can all too easily resemble a shopping list in which the relationships between individual elements are not always clear, and the central role of theory is to put the elements of the discussion into a relationship with each other, or to delineate the logic of schooling. We will attempt here to provide a description of the structures, systems and division of labour which constitute the exemplary school. In undertaking this task, we turn to the work of Basil Bernstein to outline the elements of what he called the pedagogic device,

which provides a mechanism for the production, reproduction and transformation of culture (Bernstein, 1990). For Bernstein, any pedagogic situation (for example, dentist and patient, mother and child, teacher and pupil) involves transmitters and acquirers. The school is only one of many pedagogical sites, but all share the central aim of the transmission and acquisition of attitudes, behavior, knowledge and skills. Pedagogy produces text, which in its most general sense is any pedagogic representation: spoken, written, visual, postural, sartorial, spatial; as a result of the pedagogic act, the acquirer thinks and behaves in new ways.

Any pedagogic relation places transmitters and acquirers in an asymmetrical relation, although in some pedagogical modalities (the so-called 'invisible pedagogies'), this asymmetry may be disguised. Pedagogic practice acts as a cultural relay, which both reproduces dominant culture, and provides the space for contestation and recontexutalisation of norms. According to Bernstein, three sets of rules govern pedagogic practice:

1. **Regulative (hierarchical) rules,** which are always dominant. The acquirer has to learn to be an acquirer, and the transmitter has to learn to be a transmitter. The asymmetrical nature of their relationship arises from the fact that the transmitter knows the curriculum to be transmitted and the acquirer is a seeker of knowledge. Through the regulative regime existing in the school acquirers learn the rules of social order, character and manner.

2. **Instructional (discursive) rules**, which consist of two kinds:
   a. **Sequencing rules,** which ensure progression through the curriculum, and imply a certain pacing or rate of acquisition.

   b. **Criterial rules,** which enable the acquirer to understand what counts as a legitimate or illegitimate communication, social relation or position. Criteria imply evaluation: in any teaching relation, the essence of the relation is to evaluate the competence of the acquirer. What is being evaluated is whether the criteria that have been made available to the acquirer have been achieved. Criteria may be regulative, in which case they are about appropriate conduct, character and manner. Or criteria may be instructional, in which case they are discursive and are concerned with solving a problem or producing a certain piece of writing or speech.

3. **Recontextualizing rules**. Knowledge circulates, from zones of primary production through zones of reproduction, contestation and re-production (Taylor, Muller, Cloete, Narsing, 1989). In the process of circulation, knowledge is recontextualised: for example, school physics is not the same subject taught at university, while neither adequately mirror the work of practicing physicists. Those who *reproduce* legitimate knowledge (teachers, for example) institutionalize *the thinkable,* while those who *produce* legitimate new knowledge institutionalize *the unthinkable.*

Bernstein insists that the regulative discourse is not only always dominant, but is a precondition for instruction. All pedagogic practice first creates rules of order, relation and identity. Operating within this moral order, the aim of instructional discourse is to transmit specialized competences. In the present paper we will focus primarily on the *regulative* order common in South African schools with respect to time, and how this order is mirrored in the *sequencing rules* applied in classrooms. Part 2 will continue the discussion at classroom level, and examine how the relationship between the sequencing and pacing practices in SA classrooms are associated with a particular relation to *text*. Part 3 will look principally at the *criterial rules* for determining a legitimate text in any context, and how their relationship to knowledge reflects the *professional habitus* of teachers.

But first we need to say something about the content of schooling: what it is that is to be transmitted/acquired during pedagogy? In the most general terms, the primary purpose of the school is to transmit a certain way of making sense of the world. Bernstein's research led him to understand that, essentially, people make sense of things and describe them in one of two broadly defined ways. The perspective any person adopts is shaped by his/her social relations, and by class relations in particular. The dominant form of communication in everyday life, among all classes, takes a narrative structure, and the content largely relates to a specific, local material base (context-dependent). In addition, middle class families socialize their children into an analytical perspective, which is non-linear, and is concerned with commonalities, categories and distinctions between the objects of discussion; the content of analysis is less specifically related to the material base (context-independent). Since analysis is the dominant pedagogic code of the school, it is obvious why middle class children are generally more successful at school, and why poor children appear to be discriminated against by the school system. The challenge for all schools, therefore, is to provide access to all children to the analytical perspective. This is much harder to do for poor children than it is for the middle classes.

Bernstein used the terms 'restricted code' and 'elaborated code' to distinguish between narrative and analytical orientations, respectively. He defined a code as: ". . . a regulative principle, tacitly acquired, which selects and integrates relevant meanings, forms of realizations, and evoking contexts" (1990, p.101). Table 4 sets out the main differences between restricted and elaborated codes.

Table 4: Distinction between restricted and elaborated codes

	Orientation to meaning	
	Restricted code	**Elaborated code**
Common term	Public/everyday language	Formal language
Relation to material base	Specific, direct	Less specific, more indirect
Communication modality	Dominantly narrative	Analytical
Relation to meaning	Context dependent	Context independent
Textual features	Dominantly Lexical – one-word answers or short sentences, relaying individual facts/skills/operations	Dominantly Syntactic – relaying relationships, processes, and connections

Source: Compiled from Bernstein, 1990.

Bernstein contends that social relations regulate the meanings we create, which means that the way we think and speak is shaped by our social position: for example, a dentist speaks quite differently to his patients than he does to other dentists, and quite differently still to his wife. These relations, in turn, are shaped essentially not by linguistic features, but by a semantic feature, an orientation to implicit meaning.

Regulatory rules: school leadership and management

All pedagogic discourse creates a moral regulation of the social relations of transmission/acquisition. Such a moral order is prior to, and a condition for instruction, the transmission of competences. Agencies and agents operating in what Bernstein calls the field of symbolic control exercise explicit normalizing functions: they produce general norms for law, health (physical, mental and social), administration, education, and for the legitimate production and reproduction of discourse itself. The school is the predominant normalizing agency in the field of education. The aim of symbolic control is to inscribe what is legitimate. The outcome is never certain: for the prospective acquirer,

the pedagogic situation is always a condition for someone else's order, but it carries within itself the potential for transforming the order of the imposing other. "Socialization into norms. . . is . . . always socialization both into another's voice and into one's own 'yet to be voiced'" (Bernstein, 1990, p.159). Bernstein's pedagogic device, is thus a symbolic ruler of consciousness in its selective creation, positioning, and oppositioning of pedagogic subjects. Creating regulative order in the school is, in the first instance, the job of the principal and school management. Teachers carry a massive regulatory burden in the classroom, but this occurs within a school ethos and order: we will return to the regulatory role of the teacher in Part 2, and confine ourselves at this point to school managers.

As international attention in the last decade and more has focused on calls for schools to improve performance in general, and to increase the equity of student achievement in particular, so the debate around the role of school leaders in improving performance has intensified. New conceptions of leadership have been defined, and new polarities set up, as researchers strive to find the most appropriate combination of leadership qualities and activities to respond to heightened public expectations of schools. Thus, the notion of the principal as a charismatic individual who exercises authority in a hierarchical manner is counterposed to the concept of distributed leadership, where functions are shared by school managers and teachers; the term instructional leadership gives priority to the role of the principals in directing schools towards effective teaching and learning, while the concept of transformational leadership emphasises the function of leaders as agents of social change.

The loosely defined nature of many of these terms (Prestine and Nelson, 2005) and the paucity of empirical evidence supporting claims made on their behalf (Leithwood, Jantzi, Earl, Watson, Levin, and Fullan, 2004) have moved more than one commentator to adopt a rather jaundiced view of the leadership literature. For example, Levin notes the existence of a serious problem regarding the knowledge base on educational leadership: "There are many viewpoints in the field and very little solid research supporting them. Much of what parades as research is opinion garbed in the language of research" (2006, p.43). According to Levin: "(t)wo of the challenges to leadership research . . . were the complexity of the leadership phenomenon and the degree to which values and goals of authors, rather than the research evidence itself, dominate findings and recommendations." (2006, p.41).

Nevertheless, the importance of leadership to the success of schools is undeniable. In their evaluation of England's National Literacy and Numeracy Strategy (NLS and NNS), which they judge to be one of the most ambitious and successful examples of large-scale school reform in the world to date, Leithwood *et al.* (2004) conclude that the nature and quality of leadership was a key reason for its success. Based on a large survey of English schools and case studies in 10 of these, the authors add a layer of complexity to some of the easy dichotomies frequently heralded in the literature: they conclude that transformational leadership can play an important role in school improvement, that such leadership may be widely distributed throughout the school, but that hierarchical and distributed forms of leadership both have important roles to play. Distributed leadership assumes a division of labour within the schooling system and allocates functions according to where and by whom they are best performed: under these circumstances, the challenge for leadership is communication and the coordination of the component parts. According to Leithwood *et al.* (2004), school principals perform three broad kinds of leadership functions in implementing the NLS and NSS: setting direction (and in particular fostering high expectations), redesigning the organisation, and developing people.

While leadership effects on student learning generally account for less of the variance than teacher effects (in developed countries at least), leadership creates the conditions under which teachers can work effectively: in other words, a school environment conducive to teaching and learning is a prerequisite for good school performance. In the words of Elmore and Fuhrman (2001), this entails fostering among teachers within a school a shared set of values and understandings about such matters as what they expect of students academically, what constitutes good instructional practice, who is responsible for student learning, and how individual students and teachers account for their work and learning. This is Bernstein's regulatory discourse.

But what is it that successful leaders do to improve teaching and learning in their schools? What practical advice can research provide to principals striving to improve performance? Two issues have emerged in the South African literature: time management, and curriculum leadership.

Time management and institutional culture

An analysis of data collected from principals and teachers during the

SACMEQ study revealed high levels of teacher absenteeism and latecoming, as reported by principals. This problem is particularly widespread in the four poorest quintiles of the system, where 97–100 per cent of principals reported it as a problem, but a substantial proportion of schools in the most affluent quintile (26 per cent) also report experiencing the same problem. A regression analysis reveals that the negative effect associated with teacher absenteeism is large (around 82 test point scores on a sample mean of 500) and highly statistically significant (Van der Berg and Louw, 2006b). Gustafsson (2005) has calculated that if this problem were eliminated then SACMEQ scores would improve by nearly 20 per cent in poor schools and by some 15 per cent across the system. Multivariate regressions for the other SACMEQ countries revealed that for close to half of the countries this is not a significant explanatory variable; moreover, the significance of the variable in the case of South Africa is substantially higher than for any other country. Gustafsson speculates that because the problem is widespread across both rural and non-rural schools, it is probably not attributable to transport problems and long distances.

These conclusions are supported by one of the findings of the PPP[3] study: one management level indicator which stands out is whether or not the school keeps an attendance register for teachers (Taylor, Van der Berg, Burger and Yu, forthcoming). Two other time related indicators worth noting are that in only around half of PPP schools do children return promptly after break, and that in fewer than three-quarters does school start on time in the morning.

When asked about the problem of absenteeism and latecoming among teachers, most principals tend to shrug and write off the practice to the unreliability of public transport, a lack of teacher commitment, or union militancy. The failure on the part of these principals to exert a tight time-management regime in their schools is symptomatic of a general failure to take responsibility and to exercise control over their own work environment. It would seem that South African teachers, managers and officials have not transcended the dependency culture fostered by successive authoritarian regimes over the last three centuries. Elmore (2004) notes that a culture of passivity and failure is present in schools where managers, teachers and pupils assign causality for success or failure to forces outside their control. In contrast, in two separate surveys commissioned by the Department of

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3 The Pupil Progress Project (PPP) was a school effectiveness cross sectional study undertaken in 2003 in a stratified random sample of 90 primary schools in the Western Cape.

Education into the characteristics of poor high schools which perform well in the SC exams (Malcolm, Keane, Hoohlo, Kgaka, and Ovens, 2000; Christie, *et al.*, 2007), it was found that a sense of responsibility and shared enterprise, a culture of hard work, and high value attached to good performance were strongly evident throughout these institutions: principals were focused, teachers dedicated and pupils motivated. In the 18 successful schools studied by Christie *et al.*, none were found to have significant degrees of latecoming or absenteeism among either teachers or learners.

In the face of poor teacher attendance, it would seem that learner absenteeism is not a major problem in South African schools (CASE/JET, 2007). This is a very positive feature of what is otherwise a poorly functioning system. Unfortunately, although potential learners keep showing up at school, it has become obvious that the majority of schools are highly ineffective in fulfilling the promise presented by the country's children.

Another area of time management over which principals have a great deal of control is in timetabling. Figures from the PIRLS study[4] indicate that South African schools spend significantly less time on reading than the majority of other countries who participated. As shown in Table 5, while nearly three quarters of South African schools spend less than 3 hours a week on reading, well under half of the participating schools in other countries do so; significantly lower proportions of South African schools are also found in the categories of schools who spend more than 6 hours a week or between 3 and 6 hours a week on reading, than the PIRLS mean.

Table 5: Time spent on reading

	>6 h/week	3–6 h/week	<3 h/week
International mean	25%	37%	44%
South Africa	10%	18%	72%

Source: Howie *et al.*, 2007

Furthermore many South African teachers spend less than half their time at school teaching. This finding was identified by Chisholm, Hoadley, Kivilu, Brookes, Prinsloo, Kgobe, Mosia, Narsee and Rule (2005), who, through a national survey verified by case studies in 10 schools, concluded that:

4 The Progress in International Reading Study, an investigation into Grade 4 reading performance, was conducted in 40 countries in 2006.

- Teachers work an average of 41 hours per week, out of an expected minimum of 43
- 41 per cent of this time is spent on teaching, which translates to 3.4 hours a day
- 14 per cent of in-school time is devoted to planning and preparation
- 14 per cent is spent on assessment, evaluation, writing reports and record-keeping

In strong contrast to this picture of a very loosely framed time regime in most schools, the two studies on poor schools that perform well (Malcolm *et al.*, 2000; Christie *et al.*, 2007) found that, without exception, time is a highly valued commodity in successful institutions: not only is punctuality observed during the school day, but additional teaching time is created outside of normal hours. Ensuring the effective use of time in any institution is essentially a leadership responsibility, and it would appear from the available evidence that it is a responsibility which the majority of South African principals abdicate.

There is also a policy dimension to the problem of time management: the study by Chisholm and her colleagues indicates that much time is spent by teachers during school hours completing forms which appear to serve little purpose other than bureaucratic compliance, such as formalistic planning documents, and extensive assessment reports on the performance of individual learners, supported by boxes of evidence for the latter. This is a classic example of how some regulations are self-defeating: designed to improve curriculum coverage and assessment, the onerous paperwork serves to distract teachers from the core task of teaching, thus effectively undermining curriculum completion. Such counterproductive forms of regulation recall the observation by Hubbard, Mehan and Stein (2006) that one characteristic of a good leader is to protect her staff from bad policy.

The extent to which time is used for teaching and learning is the most valid and obvious indicator of the extent to which the school is dedicated to its central task of transmission/acquisition. The evidence provided above marks the majority of South African schools as maintaining a very weakly framed regulative order, which not only creates a poor learning environment, but, in doing so, is likely to socialise children into lackadaisical work habits and a passive attitude toward their own future.

Curriculum leadership

Elmore (2003; 2008) uses the term 'internal accountability systems' to signal the processes through which the school organises effective curriculum delivery. These include: designing school improvement strategies, implementing incentive structures for teachers and support personnel, recruiting and evaluating teachers, brokering professional development consistent with the school's improvement strategy, allocating school resources towards instruction, and buffering non-instructional issues from teachers (Elmore, 2000). Citing Elmore's notion of internal accountability, Christie *et al.* (2007) note that the specific ways in which internal organisation of the curriculum and monitoring of progress is managed in successful schools differed from one to another: in some it was the task of the principal, for others it was Heads of Departments (HODs), and in a few cases, active teachers; however, in all successful schools in their sample were strong internal accountability systems in place: these schools knew what constituted the work necessary to achieve good results, and they had systems in place to do the work and monitor it.

The literature, both international and local, is short on detail concerning the activities and instruments which constitute these curriculum delivery systems, providing little practical guidance to school leaders. Locally, the PPP study found a statistically significant association between improved learning and two curriculum management factors: whether maths teachers had their own copy of the National Curriculum Statement (NCS) document, and whether the implementation of curriculum plans of Grade 6 maths and language teachers was monitored by school managers, which is done in only 56 per cent of schools according to principals, with 41 per cent of teachers agreeing (Taylor *et al.*, forthcoming).

Sequencing rules: pacing and coverage in the classroom

We now turn to a more detailed examination of one element of pedagogic practice in South African classrooms. Here we look at the second of Bernstein's pedagogic rules, which concerns the *sequencing* of classroom activities in order to facilitate acquisition of the intended curriculum. Sequencing implies a certain pace, or rate of acquisition, and it is this factor which we discuss at this point. In Parts 2 and 3 we will look more closely at the *criterial* pedagogical rules.

Explicit sequencing rules set out what competences children are expected to attain according to age: they construct the temporal project of the child, and may be inscribed in syllabuses, curricula, or rules of behavior (Bernstein, 1990). If the sequencing rules are implicit then the child initially is not aware of his/her temporal project, only the teacher is aware. South Africa attempted to introduce an implicit set of sequencing rules in 1996 with the introduction of Curriculum 2005. It was soon realized that such an implicit curriculum is inappropriate for the South African context, and it was replaced by the National Curriculum Statement in 2000. Apparently the DOE is of the view that the NCS is still considered too implicit, and hence the issuing of the Foundations for Learning Campaign, an attempt to specify in greater detail what teachers and learners are expected to do at successive grade levels of the primary school (Department of Education, 2008).

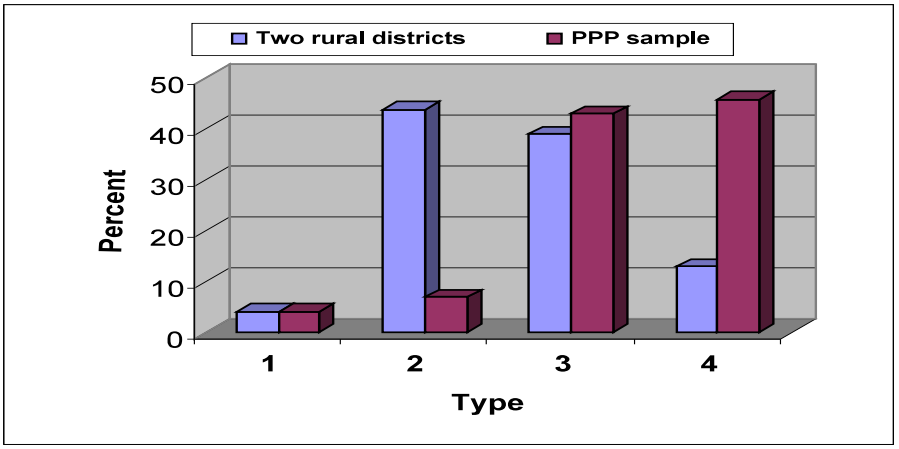
Reading is the most important skill a child learns in the early years. Once a child can read, independent solitary work is possible. S/he is introduced into non-oral forms of discourse, the rules of which are often at variance with those of oral forms; furthermore, school reading is often different from non-school reading (Bernstein, 1990). With increased reading proficiency the child becomes less dependent on the teacher and has access to alternative perspectives. Those unable to meet the sequencing rules become more dependent on the teacher and on oral forms of discourse.

By exposing the reader to descriptions of situations, ideas, and semantic and syntactic constructions outside of her experience, reading promotes the development of context-independent meanings, the understanding of principles and operations, and their application to new situations. Bernstein notes that local, context-dependent meanings generally come in the early stages of a pedagogic practice, and the understanding and application of principles come at a later stage, and the understanding of the principles of the principles even later. However, if children cannot meet the requirements of the sequencing rules and are caught up in the strategies of the repair system, which is more often the case with lower working class children than with more privileged learners, they are constrained by context-dependent meanings and a world of facticity. Such children are effectively excluded from the world of elaborated codes. Thus, the way the sequencing rules are applied distribute different forms of consciousness: while they promise what Michael Young (2007) has called ‘powerful knowledge’ to all, they often reinforce social inequality and disadvantage. Studies of sequencing and pacing in the majority of South African schools indicates that this is one of the key mechanisms responsible for poor academic performance and persistently high levels of inequality.

In Reeves' time-series study in 24 poor SES schools she found that 47 per cent of her sample experienced a pedagogical approach where the pace set was apparently very loosely bounded and appeared unconstrained by curriculum expectations. However, achievement gains across a single school year increased when teachers adjusted the pacing in their lessons in ways that were responsive to learners' levels of ability and progress. Reeves' data hints at the cumulative effects of curriculum coverage from one year to the next: coverage of grade 5 topics had a positive effect on pre-test scores of Grade 6 learners, indicating that, in relation to improving achievement outcomes of low SES learners, curricular pacing across time (inter-grade pacing over a number of school years) may be a more significant measure in relation to overall achievement status than gain across a single school year (Reeves, 2005; Reeves and Muller, 2005).

A striking feature of most South African classrooms is the snail's pace at which teachers progress through the curriculum, sometimes spending a whole lesson reading two or three sentences or talking about two or three maths problems. This slow pacing results in low levels of curriculum coverage over the year, discernable through an examination of children's workbooks, which commonly contain very low volumes of writing, often showing between ten and twenty A4 pages completed over a school year. Curriculum coverage in mathematics was assessed in the Khanyisa baseline (Taylor and Moyana, 2005) and the PPP (Taylor *et al.*, forthcoming) studies by analysing the work done in all the exercise books of the best learner in each class observed. Topics covered were checked against those specified in the National Curriculum Statement. Observations were done in October and extrapolated to estimate coverage for the year. This is a crude method of assessing coverage, which reveals neither the extent of coverage, nor the cognitive level at which the tasks identified in the work books are covered. The method of counting topics merely indicates whether these were addressed at all, at any level, for however brief a period during the year, and gives no indication as to the adequacy of coverage. They are thus a best case scenario. Comparison between the results found for the two studies (Figure 1) must be done with circumspection: the Khanyisa figures reflect the situation in Grade 3 maths classes in 24 schools in two rural districts in one of the country's poorest provinces, while the PPP results are for Grade 6 maths classes in a 90-school stratified random sample in the most highly developed province. Nevertheless, they indicate the kind of spread which occurs across the country on this indicator of teaching quality. They also reflect the bimodal distribution of maths scores in the South African school population identified by a number of authors (Gustafsson, 2005; Van der Berg and Louw, 2006b; Fleisch, 2008).

Figure 1: Curriculum coverage, mathematics



Key 4: ¾ or more NCS topics completed over year
3: Between ½ and ¾ topics completed
2: Between ¼ and ½
1: Less than ¼ covered

Source: Taylor and Moyana, 2005; Taylor *et al.*, forthcoming

Classes in only 45 per cent of the PPP sample and 10 per cent of the Khanyisa sample were on track to complete the curriculum for the year, while 42 per cent of Khanyisa children and 7 per cent of PPP children were heading to complete less than half the number of topics specified by the curriculum.

Homework: extending pedagogical time

Curricula cannot be acquired adequately using only school hours: Bernstein insists that school time must be supplemented by official pedagogic time at home, and the home must provide a pedagogic context and control of the pupil to remain in that context. The basis of homework is usually a textbook. This is an important area over which school principals have some influence. In the South African literature, two factors related to home educational practices are commonly associated with improved learning: reading and homework. In one of the early regression models run on the PPP data, the quantity of reading undertaken by children was very strongly associated with school performance, with children who read once a week having an advantage of about five percentage points in the literacy test over those who do no reading at home; when reading is done three times a week the advantage is increased to ten points, and those who read more than three times a week are likely to be about twelve points ahead (Taylor *et al.*, forthcoming). In the full regression models the effects of reading at home are more muted, but remain strongly significant.

On the question of homework, the PPP results indicate that children who do homework frequently have a performance advantage over those who do not. While this advantage is lower than that conferred by frequent reading, it is nevertheless significant. Yet, on average only 40% of South African Grade 6 children report having regular help with reading and maths homework (Strauss, 2005).

Conclusion

South African children receive schooling of a significantly poorer quality than pupils in many of our much poorer neighbouring countries. This is true in all five poverty quintiles. The first problem with the majority of South African schools is a culture which tolerates a very loosely bounded approach to pedagogic time. This is evident at four levels:

- The school day is loosely framed, with teachers and learners in many schools coming and going as they please, and frequent stoppages for a host of reasons, such as preparing for the matric farewell, or training for athletics.

- The timetable is more of a guideline than a programme which requires strict adherence, and teachers spend considerably less teaching time class than specified in the timetable.

- Once in class, pacing is too slow to meet anywhere near all the requirements of the curriculum.

- Homework offers an important supplement to time spent at school, and requires systematic attention from school managers, teachers and parents, yet only two out of five Grade 6 children get regular school-focused pedagogical support at home.

As a result of these time management practices, children in most schools are provided very limited access to the elaborated code of analytical thought. Worse, school life socializes these children into placing a low value on time, an attitude which is likely to manifest in inefficient work habits, and low life expectations.

It would seem that something in the order of 80 per cent of the nation's schools fall into Hopkins, Harris and Jackson's (1997) Type I category of school growth states. In Elmore's (2003, 2008) terms, they do not have the internal accountability systems required to meet external accountability conditions. Internal accountability refers, in this sense, to the extent to which the institution is coherently focused on teaching and learning, maximises time for these activities, and organises its internal systems around improving instruction.

But building effective internal accountability systems is a difficult process and, according to Hopkins *et al.*, not easily achieved in failing schools without outside intervention and support. In many cases, the first thing to do is to replace the principal and to stabilise school organisation. There should be a clear and concerted focus on a specific, limited number of factors: tightening up attendance; the timetable and learning course must be organised; and specific and intensive teacher reskilling focused around how to run a classroom, plan seating, run a timetable, and use resources. Above all, though, as Hopkin and his colleagues stress, these schools should be given space, and external pressure withdrawn for a specified period, in order to allow the development plan to be put into effect because, in the end, if the school does not own the strategy it cannot be made to work.

Who would undertake the task of initial intervention in the tens of thousands of failing schools in South Africa? The obvious answer is provincial and district-level structures. However, most of these offices are themselves ineffective organisations, unwilling for political reasons, or unable for technical reasons, to intervene decisively in schools; the majority lack educational authority, based on expertise, and most are in the same dysfunctional state as the failing schools they purport to administer. According to Christie *et al.* (2007), the well-performing poor schools they visited are known to their districts, but do not necessarily draw support from districts; one of the principals remarked that District Officials who visited the school said they learnt from what they saw; in many of the schools, the lack of subject advisory support was mentioned as a problem. Principals and management staff expected expertise to be provided by the District Office, but often the training provided on the curriculum (especially NCS) was felt to be too little and of poor quality. The authors conclude, that:

> [w]ithout a thorough and ongoing relationship with the District Office, which would include training, advice, and inspections, an important part of the systemic accountability and improvement system is missing.
>
> (Christie *et al.*, 2007, p.85)

A priority for improving district impact, therefore, would be to train those officials responsible for school governance and management in organisational development, industrial relations and office administration, and to hold them accountable for the efficient management of their schools. In addition, the inspectorate envisaged by the Ministerial Commission on a National Education Evaluation and Development Unit (Governement Gazette, 2009) may help in policing time management in schools.

However, the problem is too widespread and too deeply ingrained in the culture of schooling to be changed simply by improved training and tighter policing. The longer term project must be to move teachers toward a different habitus, where agency is intrinsic and the pursuit of knowledge the goal of professional life. We will return to this issue in subsequent chapters of this discussion.

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