

Improving Education Quality in South Africa

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INTRODUCTION AND DIAGNOSIS OF LOW EDUCATION QUALITY

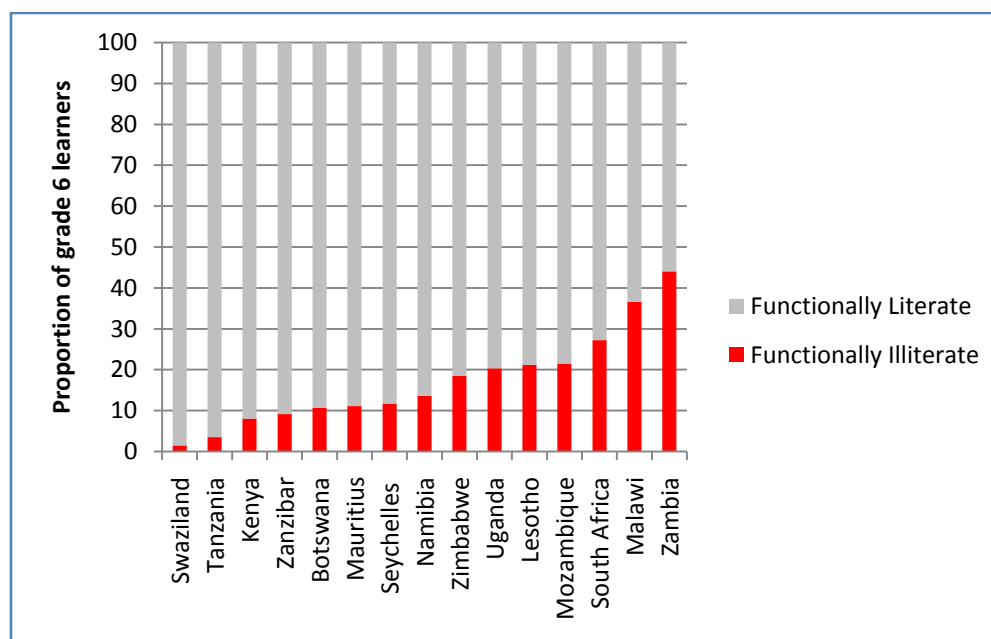
At the time of transition to democracy, fundamental reforms to the administration, governance and funding of education were immediately necessary. A unified national department of education was established while considerable responsibility was vested at the provincial level. Curriculum reform, although ultimately not uncontroversial, represented a strong break from previous arrangements and sought to advance critical thinking and problem solving. Public spending on education has gone from being highly unequal on the basis of race under apartheid to being well targeted towards poor children. Despite these mainly positive trends, a far more resilient legacy from the past has been the low quality of education within the historically disadvantaged parts of the school system. This seriously constrains the ability of the education system to provide a pathway out of poverty for poor children.

A cross-country comparison of educational attainment reveals a peculiar pattern specific to South Africa. The rate of attainment of levels of education up until about 11 years is high in South Africa relative to other middle-income countries. Beyond 12 years of education, however, South Africa's attainment rate is amongst the lowest of these countries. As far as access to education is concerned, it would therefore appear that South Africa is doing well throughout most of the primary and secondary phases and poorly thereafter. However, it is important to understand that high rates of grade progression despite a generally low quality of schooling in the primary and early secondary phases leads to substantial drop-out prior to the standardised matric examination, failure to pass matric and failure to achieve a university endorsement – all reasons for discontinuing education. A closer analysis of *access* to education in South Africa thus points to a deeper problem of *quality*.

In the recently conducted SACMEQ¹ III (2007) survey of Grade 6 mathematics and reading, South Africa performed below most African countries that participated in the study. An alarmingly high proportion of Grade 6 learners have clearly not mastered even the most basic reading and numeracy skills. Using a categorisation of competency levels provided by SACMEQ as a benchmark, learners who have not reached Level 3 in the reading and mathematics tests can be regarded as functionally illiterate and functionally innumerate in the sense that they have not acquired the basic reading and numeracy skills necessary to function meaningfully in society (Shabalala, 2005: 222). Of the 15 education systems that participated in the study, South Africa has the third highest proportion of functionally illiterate learners (27%), and the fifth highest proportion of functionally innumerate learners (40%). Figure 1 shows the proportions of functionally illiterate grade 6 learners within each SACMEQ country.

¹ SACMEQ stands for Southern and East African Consortium for Monitoring Education Quality.

Figure 1: The prevalence of functional illiteracy in SACMEQ 2007



Within South Africa, the quality of education varies widely. Several authors characterise the South African school system as effectively consisting of two differently functioning sub-systems (Fleisch, 2008, Van der Berg, 2008, Taylor and Yu, 2009). The majority of children are located in the historically disadvantaged system, which still serves mainly black and coloured children. Learners in these schools typically demonstrate low proficiency in reading, writing and numeracy. The second sub-system consists mostly of schools that historically served white children and produces educational achievement closer to the norms of developed countries. This second system serves mainly white and Indian children, although black and coloured middle class children are increasingly migrating to these schools. Literacy and numeracy testing within the National School Effectiveness Study (NSES) demonstrates that *grade 5* learners in historically black schools are performing considerably worse on average than *grade 3* learners in historically white schools (Taylor, 2011). Thus, by early primary school, children in historically black schools already carry an educational backlog equivalent to well over two years worth of learning. This motivates urgent attention to issues of quality at the primary school level and even earlier in Early Childhood Development (ECD).

SIX AREAS OF RECOMMENDATIONS: THE VISION

Developing capacity within the teaching force

In order to achieve educational progress South Africa needs an institutional structure (encompassing teacher pay, bursary programmes and other interventions targeting existing teachers) that promotes good teaching and that attracts and retains the best teachers.

School Management for Instructional Leadership

Effective schools require well selected individuals as principals together with management teams that understand and fulfil their roles as leaders of the curriculum, ensuring that an organised environment conducive to learning is present.

Strengthening relationships of accountability and support amongst stakeholders throughout the school system

What is envisaged is an institutional structure that is designed to avoid a breakdown in the implementation of policy due to a lack of capacity at any particular link in the chain, but that also enables capacity to be built up at levels of authority that are deemed to have an important role in the long run. Furthermore, an effective institutional structure will require a better alignment of the interests and incentives of stakeholders around the common goal of educational improvement.

In the case of districts, the McKinsey report (2007) offers a picture of how the “mediating layer” of the district should function: (1) targeted support to improve practices within schools, (2) facilitation of communication and information sharing between the authorities and schools, and (3) facilitation of sharing of best practices between schools. Arguably in the case of South Africa the bulk of attention has focussed on the information sharing function, and mainly in a downward direction. Other ways of strengthening schools remain largely unexplored.

Sharpening accountability through better information to parents and education authorities

South African schools require an educational assessment framework that (1) empowers parents with information on their child’s performance, 2) informs teachers of correct assessment practices and highlights to them learning areas needing improvement, and 3) helps policy-makers and districts determine the rate and extent of progress in different sectors of the education system, reasons for under-performance and which schools require specific types of interventions.

Improve understanding of the language issues

Reducing the language disadvantages experienced by many learners will require language policies informed by a better understanding (through further research) of the mechanisms through which language factors affect learning outcomes and of when and how the switch to English as Language of Learning and Teaching (LOLT) should be implemented. Crucially though, the quality of teaching English as First Additional Language (FAL) in the Foundation Phase will need to be improved.

Improve the quality of ECD facilities

All South African children should have access to ECD facilities that are closely monitored and well supported ensuring a high quality so as to give children a better foundation for learning upon entering primary school.

KEY PROPOSALS

Note that the proposals made throughout this section are summarised in an Appendix, which presents a timeline for the phasing in of proposals.

1. Developing Capacity within the Teaching Force

1.1) PROBLEM STATEMENT

The McKinsey Report (2007) on successful education systems concluded that the quality of a school system cannot exceed the quality of its teaching force. Low teacher effort is often considered one of the most serious problems in South African schooling, perhaps even bigger than weak teacher content knowledge and pedagogical skills to successfully teach the curriculum.

Although teacher time-on-task is often raised as a serious concern, existing evidence regarding the impact of teaching time on learner performance is not compelling in either direction. Some studies have not found evidence that insufficient teaching time (based on self-reported data) is a key factor behind under-performance (Taylor, 2011: 27; Gustafsson and Patel, 2008: 25). On the other hand Shepherd (2011: 26) finds that extra classes offered by teachers outside the normal school day are associated with better learner results. A closely related matter is that of teacher absenteeism. A study by Reddy *et al* (2010: ix) found that around 11% of teaching time was lost due to teacher absenteeism, though this was not exceptionally poor by developing country standards. Instances of one-day leave were substantially more common on Mondays and Fridays than on other days of the week, indicating an abuse of the leave system to extend weekends.

A number of recent studies have drawn attention to weak teacher content knowledge (Spaull, 2011; Stols *et al* 2007; Taylor and Moyana, 2005; Carnoy *et al*, 2008). Although the evidence is accumulating, it is less clear what can be done about teacher content knowledge. The DBE's existing strategy of short in-service training courses does not seem to be particularly effective. Taylor (2008: 25) concludes that "short courses of the order of 3-5 days have little impact. It is becoming apparent that intensive in-service training, in the order of weeks per year, is required to equip teachers with the knowledge they need to teach effectively." Such extensive in-service training may however not be feasible. In response to this, an alternative strategy is proposed in the forthcoming section – one that seeks to give teachers an incentive to take responsibility for their own content knowledge.

Is the pay of teachers too low to justify higher levels of effort? Considering that teacher pay relative to *per capita* GDP in South Africa is exceptionally high by international standards, that teachers received a pay increase of roughly 15% in real terms between 2007 and 2009 and that productivity and effort amongst many teachers is low, it is hard to argue that on average teacher pay should be higher. Rather than focussing on the *level* of average pay, the key concern should be on how to adjust the salary *structure* in order to, firstly, incentivise good teaching and,

secondly, improve salary increments linked to years of experience in a way that reduces the attrition of good teachers and attracts high-achieving candidates into the teaching profession.

Arguably the biggest downfall of teacher pay in South Africa is the fact that the system hardly differentiates between better- and worse-performing teachers. Whereas South Africa had an exceptionally flat age-wage gradient in 2007, major changes to the salary system briefly introduced in 2008 would have considerably improved this gradient and would have ensured that those teachers evaluated as being better performing by their supervisors would benefit most (Gustafsson and Patel, 2008: 21). However, many of the 2008 changes were reversed in 2009 due to union pressure, meaning that the problem of insufficient rewards linked to years of experience remains unresolved (and the magnitude of the problem is not clear as the impact of current policies on the wage-age gradient over time have not been analysed). Several studies (Gustafsson and Patel, 2008; Armstrong, 2009; Van der Berg and Burger, 2010) suggest that unless experience-related increments for teachers, and in particular better performing teachers, are improved, more capable teachers will be strongly inclined to leave teaching in their mid-career. Discussions with education analysts suggest that despite the 2009 reversal of pay differentiation, unions are not completely opposed to such measures to improve educational performance. The challenge seems to lie in putting forward an incentives policy that is sufficiently informed by what has worked elsewhere and is sensitive to specifically South African equity concerns.

Unfortunately, available analyses of the teacher salary system and teacher pay trends are not sufficiently detailed for policymakers to be sufficiently informed about this critical area (the pay of public school teachers constitutes around 3% of GDP). Specifically, comprehensive analyses of teacher pay using payroll data are rarely produced. This poses serious risks for the policymaking process and the vital central bargaining process between government and teacher unions. Periodic reports of key trends that respond to the needs of planners and salary negotiators are needed.

1.2) KEY PROPOSALS

1.2.1) EXPAND THE FUNZA LUSHAKA BURSARY SCHEME

The main response from government to the need to attract more teachers has been the Funza Lusaka bursary programme. Initial reports suggest that this programme is expanding its coverage although it will clearly need to expand further to make up the estimated annual shortfall of new teachers. Funza Lushaka represents an important new strategy and should be strengthened and expanded. In order to get a better sense of its effectiveness it will be necessary to research whether Funza Lushaka is attracting more high-achieving individuals into teaching than was previously, or would otherwise be, the case.

1.2.2) CHANGE THE STRUCTURE OF TEACHER PAY SO AS TO ATTRACT AND RETAIN GOOD TEACHERS

Bursaries alone will not attract enough top-achieving candidates into teaching and are powerless to retain good teachers. Some form of teacher incentives are needed to attract and retain the best teachers. South Africa's flat age-wage gradient acts as a disincentive for highly skilled people to enter or remain in the profession. If the quality of teaching for the next generation is regarded as a priority, changes to the structure of teacher pay similar to those proposed in 2008 should be (re)introduced and persevered with.

Some way of linking teacher pay to learner performance should be explored and extremely carefully designed. Arguably, the greatest need for some form of incentivisation is at the primary school level, given that there is currently little publicly available information about learner performance across primary schools. The Annual National Assessments (ANA), if externally validated for at least one primary school grade (as proposed below), could provide a usable measure of primary school performance. For secondary schools the matric examination results and an externally validated grade 9 ANA could be used as measures of school performance. Importantly, schools that demonstrate improvement in learner performance, and not only top-achieving schools, should be rewarded. This would ensure that low-performing schools, more than any others, would have an incentive to generate improvement.

1.2.3) AN INCENTIVISED PROGRAMME TO IMPROVE TEACHER CONTENT KNOWLEDGE

An alternative to rewarding teachers for producing good learner performance (a teacher outcome) is to reward them for demonstrated competence (a teacher input). Here, one can learn from the Chilean system, which provides financial incentives to teachers for performing well on evaluations of their subject knowledge (the AVDI programme).

The proposal for South Africa is that each year there should be an opportunity for teachers to take an examination that is closely focussed on the curriculum that they teach. Within each education band, there should be a test for each subject. Teachers choosing to participate should write the test corresponding to the subject and highest band in which they teach. For Foundation Phase teachers a more generic test would probably be appropriate. For the sake of accurate budgeting, a fixed number of teachers should receive the financial bonus. This should be paid out over, say, three years so that teachers are tested regularly but not unnecessarily often. The size of the reward should be large enough to make it attractive for teachers to opt into taking the test and to motivate them to spend time improving their content knowledge in preparation, which is really the point of the proposal. The number of teachers who qualify annually should also be large enough to encourage more than just a small elite to participate and receive a financial reward.

One could further manipulate the design so that more experienced teachers receive a larger reward. This would create a much needed incentive for the best teachers to remain in the profession. Moreover, allocating a percentage of the rewards to specific provinces and quintiles

would, firstly, ensure that equity concerns were addressed and, secondly, create additional incentives for better teachers to take up posts in historically disadvantaged areas.

The implementation of such a programme would need to be carefully thought out and some of these suggested details therefore may need to be adapted. For example, existing Chilean and Brazilian programmes should be more closely investigated to draw lessons about the design of the tests and regarding costing estimates. It may also be advisable to run a pilot programme designed to evaluate the potential impacts of such a scheme on teacher content knowledge and perhaps also on learner achievement. A randomised evaluation using treatment and control samples of schools is recommended.

In principle, however, the simultaneous but independent implementation of self-administered diagnostic tests, professional development courses to target content knowledge and a reward for passing a subject knowledge test could be very complementary and foster a situation in which teachers are aware of their knowledge gaps, have a facility to improve these as well as a strong incentive to do so.

1.3) TRADE-OFFS / RISKS

UNION PRESSURE

A notoriously difficult aspect of the South African labour market is the extent of influence that unions are able to exert in terms of wage stipulations and wage structure. There is likely to be resistance to performance-related pay from unions, highlighting the need for a fundamental change over the long run in the way unions influence education policy. At the same time, it appears that past attempts to introduce a more differentiated salary structure might have fared better if proposals had been more thoroughly researched (using, for instance, polls of teacher opinion) and had been ‘sold’ more effectively to unions.

OBJECTIVE PERFORMANCE MEASURES

Learner performance is dependent on many factors other than the level of teacher performance and effort in the classroom. Performance measures must therefore ensure that an accurate measure of teacher performance is taken and teachers should not be “punished” for factors outside their control that adversely affect the performance of their learners.

DESIGN OF INCENTIVES

The success of incentive systems is highly dependent on careful design. Internationally, group- or school-based incentive programmes appear to promote teamwork and achieve larger and longer lasting improvements relative to programmes that reward teachers individually.

AVOIDING PERVERSE INCENTIVES

The outcome measure according to which rewards are allocated needs to be carefully chosen so as not to create perverse incentives. Examples of the kinds of behaviour that incentive schemes can inadvertently produce include so-called “teaching to the test”, neglecting classes and grades that are not subject to the high-stakes assessment and discouraging weak learners from participating in the assessments. The perverse incentive to hold back candidates from writing matric could, for instance, be dealt with by using the number of matric passes relative to grade 10 enrolment two years earlier to determine financial bonuses.

1.4) PHASING OF PROPOSALS

Short term (1 to 2 years):

- Extensive thought and research should go into designing a structure of teacher pay that creates the right set of incentives, potentially including a randomised control trial to test the likely impact of a “content knowledge test reward” programme.
- Research on the impact and extent of bursaries must be undertaken urgently. Flowing from this research, changes to the bursary programmes should be designed.

Medium term (3 to 4 years):

- Implementation of changes to bursary programmes.
- Implementation of “content knowledge test reward” programme.
- Introduction of more attractive salary scales for teachers as well as a plan to communicate these to prospective teachers in the South African labour market.

2. School Management for Instructional Leadership

The school principal, in combination with the school management team (SMT), has a particularly challenging yet crucial role to fulfil. On the one hand, principals who have been trained and have gained experience as teachers must now effectively manage fairly large and complex institutions. On the other hand, a purely managerial and administrative focus can distract principals from leading the school in its central task of teaching. A useful analytic framework for understanding the proper function of school management is provided by the notion of instructional leadership.

Instructional leadership emphasizes the role of principals as leader of curriculum coverage and teaching in the school. Hoadley, Christie and Ward (2009) find that the majority of South African principals do not regard the oversight of curriculum and teaching as their main task, but feel that responsibility for this lies with subject heads and HODs. Perhaps as a consequence of this perception, principals do not spend the majority of their time on aspects of instructional leadership but rather on administrative duties and learner discipline (Hoadley *et al*, 2009: 381).

2.1) PROBLEM STATEMENT

How does weak management and instructional leadership manifest in South African schools? Hoadley *et al* (2009) argue that successful instructional leadership occurs through ensuring curriculum coverage, good management of resources and structuring the school day effectively. Weak instructional leadership therefore can be highlighted by evidence of insufficient curriculum coverage, poor management of resources and loss of teaching time.

In a survey of primary school classroom practices in South Africa, Hoadley (2010) finds that low time-on-task and content exposure, poor curriculum coverage, low teacher-expectations and insufficient use of textbooks all erode the opportunity to learn. These shortcomings in teacher practice are all to some extent a function of instructional leadership. School management, for example, has an important role to play in procuring textbooks and additional texts to provide teachers with pedagogical tools and to ensure that these texts are effectively used. Even teacher content knowledge may be responsive to instructional leadership as principals cultivate a professional approach amongst their staff. Similarly, the phenomenon of excessively large classes in South Africa is often a matter of school management. Large classes combined with too many “free” periods for teachers often occurs when school principals do not understand how to deploy teachers effectively within the timetable.

The National School Effectiveness Study (NSES) provides some indication of how instructional leadership operates and of its importance in affecting learning. According to the NSES data, teacher absenteeism was approximately twice as high in schools where the teacher attendance register was not up-to-date (Taylor, 2011). The state of attendance registers is a reflection of how seriously teacher attendance is taken by the school management, and this clearly impacts upon actual absenteeism.

An important aspect of the job of school principal is to be the leader of curriculum implementation. An extensive review of learner workbooks conducted within the NSES, however, has confirmed that curriculum implementation typically does not extend to the parts of the curriculum with high levels of cognitive demand. The evidence suggests that learners in many grade 5 mathematics classrooms never or hardly ever undertake complex exercises. For one in three grade 5 English classes there was no evidence of any paragraph length writing in learner workbooks. It is unsurprising then that learner performance on NSES test items that required either multi-step mathematics calculations or a written answer of at least a sentence was extremely poor.

Multivariate statistical analysis of learner performance in the NSES has confirmed that various indicators of instructional leadership are indeed associated with learner outcomes, in fact more strongly than additional resources (Taylor, 2011). Variables from the learner workbook review that were strongly associated with learning include the number of literacy exercises undertaken, the frequency of paragraph length writing, having organized records of assessments and the number of mathematics curriculum topics covered. Variables reflecting the school's

organizational efficiency included the quality of LTSM inventories, evidence of curriculum planning and the presence of an effective timetable. Interestingly, learners in schools where the principal was absent on the day of the NSES survey recorded lower test performance. This is a very concrete indicator of the strength of instructional leadership in the school.

2.2) KEY PROPOSALS

An important principle that should apply to several of the recommended interventions is that of differentiation between schools of varying functionality. Schools that are already operating at a high level of efficiency should not be burdened by having to fulfil additional and unnecessary tasks that are imposed to improve accountability in weakly performing schools. On the other hand, very low-performing schools should receive the closest attention. This principle seems to have already gained some acceptance within the DBE, as reflected by the statement in the recent report on the Annual National Assessments that “ANA will help to ensure that schools receive the support they should receive and that schools are not obliged to participate in development activities which they have no need for.” (DBE 2011b: 10) Using learner performance data, schools should be split into categories that receive differential support and interventions.

2.2.1) CHANGING PERCEPTIONS REGARDING THE ROLE OF THE PRINCIPAL

Reports suggest that principals perceive their function as predominantly administrative and managerial as opposed to as instructional leaders responsible for the effective delivery of curriculum and teaching. This has to be changed. There is growing sentiment amongst educational specialists that children must be immersed in text and that this is being neglected in many classrooms at present. Getting principals to understand the value of this and their role in encouraging better use of text and other support materials is one strategic point of intervention. The functions of the principal as instructional leader should be emphasised at professional development courses and should form part of what principals are assessed on.

2.2.2) MONITORING SPECIFIC ASPECTS OF INSTRUCTIONAL LEADERSHIP

Certain of the more observable functions of instructional leadership should be monitored. Curriculum coverage is one key area of school functionality stemming from instructional leadership that could be more effectively monitored. Principals of schools requiring attention in this area could be required to report regularly on curriculum coverage. Reviews of learner workbooks can provide telling information about the coverage of curriculum and practice of exercises within classrooms, and could therefore be used for the purposes of monitoring. Since macro pacing of the curriculum has now been specified in the Curriculum Assessment Policy Statements (CAPS) and very prescriptive workbooks have now been distributed, the scaffolding for accurate monitoring of curriculum coverage is already in place. Ways to monitor the procurement and use of textbooks and other support materials should also be investigated.

2.2.3) ENSURING THE BEST PEOPLE BECOME PRINCIPALS

The indicators of good management identified by research should be interpreted as some of the characteristics typically exhibited by good managers, rather than as levers to be manipulated by policy to achieve improved learner outcomes. One cannot hope to monitor and enforce every aspect of good management. A better and indeed more ambitious route for policy would be to explore ways to attract, train and support better principals, and to replace those at the head of dysfunctional schools. Learner performance data could be useful to draw attention to “at-risk” schools. Some form of performance contracts could be imposed on principals at these schools. If performance targets are consistently not met, monitoring information speaks negatively and investigations based on interviews with school stakeholders confirm that the principal is ineffective then such principals should be replaced.

2.3) TRADE-OFFS/ RISKS

When monitoring specific managerial functions there is a risk that principals will start to “window dress”: they may focus on these aspects at the expense of other unobserved management functions and of the central task of teaching.

District officials may be the right people to implement the monitoring although this carries a risk of the process losing its teeth and becoming a token exercise. Therefore, an independent team of monitors, perhaps from the National Education Evaluation and Development Unit (NEEDU), should visit the “at-risk” category of schools to ensure that these schools are closely observed and supported. A credible monitoring process will be especially important to provide legitimacy for the replacement of principals failing to satisfy performance contracts.

The principle of differentiation between schools of varying functionality will be important to avoid additional monitoring requirements being imposed on already effective school leaders.

2.4) PHASING IN OF PROPOSALS

Short term (2 years):

- A team of experts on school leadership and management should identify specific managerial functions to be monitored. School principals themselves should be represented on this team to enhance legitimacy.
- The 2011 ANA data should be used to experiment with categorizations of schools for the purposes of differentiation. During 2012 the feedback to schools on ANA results should include information as to the performance category into which the school fits. Together with this information it should be conveyed to schools that this categorization will form the basis for monitoring attention and performance contracts with principals.

Medium term (3-4 years):

- A new and sharpened monitoring programme should be put in place.

3. Strengthening relationships of accountability and support amongst stakeholders throughout the school system

3.1) PROBLEM STATEMENT

A major problem identified in education administration is the fact that the movement towards educational decentralization has often not been accompanied by strong systems of accountability and support. Although South African schools enjoy considerable freedom in the way teaching and learning occurs, accountability structures remain rather weak and the various stakeholders throughout the system do not always act in a coordinated fashion and even have different goals in some cases.

For example, *teacher unions* often narrowly pursue better working conditions, higher wages and the strengthening of political power, rather than the professional development of teachers or the educational interest of children. Weakly functioning *district authorities* also require attention. In South Africa, districts tend to fulfil almost exclusively a monitoring role and therefore are often ineffective at providing support to schools. Another key institutional feature of the South African school system is the authority assigned to *School Governing Bodies* (SGBs). The effective functioning of SGBs, however, is constrained by a lack of capacity amongst parents in many poor communities. At the *national level*, South Africa lags behind comparable countries when it comes to the development of testing systems, diagnostic tools and intervention ‘packages’ that can be used by different actors within the system (such as parents) working at improving the performance of schools and school accountability.

3.2) KEY PROPOSALS

3.2.1) IMPROVE THE ROLE DEFINITION, CAPACITY AND INTERVENTION TOOLS OF DISTRICTS

A clearer understanding of the functions of districts is required. In particular, the functions of support and monitoring should be carefully considered and designed so that these two functions are not mutually self-defeating.

In designing the functions of district offices consideration should be given to capacity issues. Lack of capacity may limit what can reasonably be delegated to district offices. On the other hand, it may be possible to build capacity at the district level through, for example, clearly communicated role definitions and through revising the selection process of district officials.

Support to schools must clearly be improved. As it takes time for the desired level of professional capacity to be built up at the district level, the focus presently should be on improving the presence of intervention tools that district officials and others assisting schools can easily use. The development of tools should involve partnership with experts from outside government and careful piloting of the tools. Above all, tools that are taken to scale should have a proven track record.

3.2.2) PROMOTE PARTNERSHIP FOR QUALITY IMPROVEMENT WITH THE TRADE UNIONS

The education authorities can actively encourage teacher unions to become more integrally involved in matters of educational quality in several ways. For instance, in Uruguay unions were invited to participate in the design of their standardised assessment system (Ravela, 2005). Alternatively, government could sponsor advanced studies for senior union leaders and promote the establishment of a research journal at least partially owned by the unions, or a teacher development institute run by the unions. Experience in other countries shows that without a critical level of professional engagement in education quality issues amongst union leaders, it is difficult to get unions to move beyond a rather narrow concern with just salary increments.

Second, the education authorities need to ensure that policies designed to advance quality are credible. There are examples where insufficiently credible testing systems and incentive programmes were introduced, causing a general loss of confidence in these types of interventions and reluctance on the part of unions to co-own the interventions. Importantly, not only should interventions be technically robust, they must also be understood by union leaders. In other words, considerable effort needs to go into explaining the rationale for the intervention and presenting the predicted effects (and even risks). For these interactions to be properly informed requires greater commitment to analysis (for instance teacher pay analyses in preparation for meetings with unions).

Third, the pursuit of optimal policies regarding teacher accountability and incentives should not be driven only by government and union beliefs. Teacher opinion, which has frequently been shown to differ from union leadership opinion, should also influence the policymaking process. In practical terms, this underscores the need for periodic teacher surveys run by government, or perhaps government and the unions jointly.

3.2.3) GENERATING AND DRAWING ON SUPPORT OF CIVIL SOCIETY

SGBs are currently given a strong legislative mandate to fulfil the governance function of schools, including extensive responsibility in finances and setting internal school policies. Although many SGBs are significantly hampered by the lack of expertise or social power of parents relative to school staff, this is not an institution that should have its agency diminished, for both democratic and practical reasons. The educational improvements experienced in several East-Asian countries highlight the importance of parent attitudes and participation in their children's schooling (Jeynes, 2008: 14). SGBs present an important opportunity to both allow parents to hold schools accountable and to generate parental participation in communities where they may otherwise be reluctant. Additional support should therefore be given to SGBs to enable them to successfully fulfil their mandate.

3.3) TRADE-OFFS / RISKS

The skills needed for interventions in schools are considerable given the complexity of the task. Despite the weakness of skills levels in this area, fairly standardised forms of school intervention limiting the discretion of district officials are necessary. This emphasises the need for intervention methods to be credible and carefully piloted before being implemented in schools. The absence of such tools should be seen as a serious problem in South Africa.

There is a risk of policy paralysis through attempting to please everybody. Ultimately, if a real turnaround in the performance of the system is to be achieved it will require some strong interventions of the kind that are likely be controversial amongst some interest groups.

4. Sharpening accountability through better information to parents and education authorities

4.1) PROBLEM STATEMENT

Prior to the implementation of the Annual National Assessments in 2011, there was no standardised, national exam at any level other than grade 12. A number of studies have demonstrated that internal assessment practices in many of South Africa's schools are particularly weak, with the marks awarded to learners often being overly lenient and random (Lam, Ardington and Leibbrandt, 2010; Van der Berg and Shepherd, 2010). Consequently, parents received little or inaccurate feedback about the true performance of their children. Given that parents have the greatest interest in promoting the educational well-being of their children, it is commonsense that they should be the ones to hold schools accountable. For this parents require reliable information on their child's progress and on relative school performance. Receiving such information in an understandable format would serve to empower parents and communities and in this way improve the quality of primary education in South Africa.

The introduction of the first Annual National Assessment (ANA) in 2011 begins to address the weak assessment practices and lack of transparency regarding learning outcomes within much of the school system, especially amongst primary schools. By providing assessments at the level required by the curriculum, ANA should give teachers a better idea of the standards their learners ought to be attaining. Many primary school teachers are currently under the mistaken impression that their learners are meeting the level required by the curriculum when in fact they are performing well below such levels (Van der Berg *et al*, 2010a). The DBE's "Delivery Agreement" envisages the expansion and strengthening of ANA so that this programme will be a "cornerstone of quality improvement in South Africa's schools". There are several clear ways in which ANA should be strengthened.

4.2) KEY PROPOSALS

4.2.1) IN ONE PRIMARY SCHOOL GRADE, ANA SHOULD BE EXTERNALLY ADMINISTERED AND MARKED

At this stage ANA is both administered and marked locally by schools. This leaves the system open to various forms of cheating and lenient marking, which would diminish the information value of ANA. The “Verification ANA” should provide a rough indication of the extent to which such practices are occurring. In the most recent ANA report (2011), the Department notes such a discrepancy: “The high average scores in Grade 3 in the case of the Eastern Cape in ANA suggest that different standards were applicable in these tests and in this province” (DBE, 2011: 20). In view of this potential weakness the “Delivery Agreement” recognises that it is crucial for ANA to become comparable across schools and provinces and over time. In at least one primary school grade (perhaps Grade 6) ANA should be externally administered and marked to ensure that there is at least one reliable system-wide measure of quality for all primary schools. Within schools, this would also serve to provide some indication of possible inaccurate or lenient marking of ANA at other grade levels. An independent, reliable and public evaluation of learner performance early on in the schooling process will be an important step in improving the quality of primary schooling in the country.

4.2.2) PRESENT THE RESULTS OF ANA TO PARENTS IN AN ACCESSIBLE FORMAT

It will also be necessary to explore how best to present the results of ANA to parents and the community so as to empower them with information about their child’s as well as the school’s performance. Here one should consult the experience of other countries, such as Brazil, who have experimented with report card systems. It is also recommended that the top-performing schools within districts and communities should be publicly recognised. A minimum requirement is that SGBs be provided with a comprehensive and comparative breakdown of their school’s performance relative to that of similar schools in the area and in their province. Ideally, parents should also have access to this information to the extent that they can answer questions such as: “How is my child performing relative to learners in other schools?” and ‘How is my child’s school performing relative to other schools in my district?’ The media and NGOs can play an important role in this regard, and assist in providing more transparent, visually attractive and informative report cards. These report cards could advise parents on specific ways to help their children to improve in those areas where they are performing badly. Well designed report cards should generate parental involvement, interest, and encouragement, which are key to the progress of a child’s education.

4.2.3) INTRODUCE A GRADE 9 QUALIFICATION

Given that more than half of South African youths currently do not attain matric, it is recommended that an earlier qualification be introduced to provide some of these youths with a signal of ability to the labour market, but also to public and private vocational training institutions. The Grade 9 ANA could be used as the first step towards introducing an official

qualification. Of course this would also require external validation. This could be an important step towards providing an attractive non-academic route to the labour market. With large numbers of learners not attaining a university endorsement in the matric examination, there is a strong case for promoting a mainstream and attractive non-academic alternative route to the labour market.

4.3) TRADE-OFFS / RISKS

COST

As one might expect, the cost of testing almost six million learners, as in the case of the 2011 ANA, is substantial. Similarly, if the ANA in one grade (preferably Grade 6) is externally administered and marked, as this report suggests, this is likely to be a significant budgetary addition. The DBE will either have to allocate significant human and financial resources to conduct the External ANA, or preferably, appoint an independent service provider similar to Umalusi in the case of the final matric exam. However, these costs must be seen in light of the benefits of an externally validated ANA: greater empowerment of parents to hold schools accountable, reliable school performance data for every primary school, accurate benchmarks for assessment, and greater priority for the quality of education provided at the primary school level.

PERVERSE INCENTIVES

Given that schools mark their own learner's exams (unlike matric), there may be an incentive for teachers or principals to manipulate the ANA results and falsify the rate of progress in their schools. This is likely to become more of a problem if the ANA tests are used as a measure of teacher performance for internal or external remuneration purposes. This is one of the reasons why an externally validated ANA is an important milestone in the search for accountability and improved educational quality.

4.4) PHASING OF PROPOSALS

Short term (2 years):

- Grade 6 ANA is externally administered and marked.
- All Grade 6 parents receive a report card indicating their child's performance relative to other learners in their school. Suggestions for improvement are also provided.
- All SGBs are presented with a detailed report card for Grade 6 performance including appropriate comparator schools in the district, province and country.

Medium term (4 years):

- One other primary school grade's ANA is externally administered and marked per year on a rotating grade basis.
- Grade 9 ANA's are externally administered and marked, with a formal qualification based on the results of these tests.
- All parents receive a comprehensive scorecard detailing not only learner performance, but also school performance relative to comparable schools in other districts and provinces.

Long term (5 years):

- Externally validated ANA's are used for remunerating and promoting teachers. The suggestions expressed elsewhere in this document about the design issues regarding teacher incentives should be consulted.

5. Improve understanding of the language issues

5.1) PROBLEM STATEMENT

The South African constitution and the South African Schools Act (1996) protect the right of children to learn in their choice amongst any of the 11 official languages. In practice, most South African children learn in their mother tongue during the Foundation Phase and then experience a switch of the Language of Learning and Teaching (LOLT) to English at grade 4, although the exact extent to which this practice is followed is unclear given existing data.

Some researchers believe that South Africa's poor performance, as measured in local and international tests, is driven primarily by the language disadvantage. Howie (2003), for example, believes that "the most significant factor in learning science and mathematics isn't whether the learners are rich or poor. It's whether they are fluent in English." While there is surely some truth to the view that weak language proficiency in English spills over to learning in other subject areas, it is necessary to acknowledge the strong and complex relationships between language, socioeconomic status and school functionality in South Africa. On average, those who learn in their second language also have a lower socio-economic status than first-language English and Afrikaans speakers. In addition, these second-language learners are more likely to attend schools characterised by weak management, poor accountability, low levels of cognitive demand and the myriad of other factors associated with less well-functioning schools in South Africa.

There are a number of what Fleisch (2008) calls "generative mechanisms" through which language factors affect learning outcomes. There are clearly linguistic factors such as the density of unfamiliar words. Also the practice of code-switching, which is believed to be common in South African classrooms, effectively doubles the time needed to teach concepts through the need to repeat information in two languages. Another generative mechanism is that many African language learners are taught in English but are not frequently exposed to English outside of the classroom. This is especially true of many rural areas where English is effectively a foreign language. Taylor (2011) has found that frequent exposure to English through speaking at home and through watching television is strongly associated with learning amongst primary school children even after accounting for their home language.

In summary, learners who speak English as a second-language clearly perform worse on average than their first-language English counterparts, but it is not clear *why* they perform worse. It could be due to linguistic disadvantage, school-level factors, home background, or, more likely, some combination of all of these.

5.2) KEY PROPOSALS

5.2.1) UNDERTAKE RESEARCH DEALING WITH UNRESOLVED LANGUAGE ISSUES

Research is required to investigate the extent to which underperformance amongst learners whose home language is not English or Afrikaans can be attributed to language factors. A statistical analysis of existing sources of data will provide a good start, although a more resource-intensive experimental research design would be more powerful for isolating the impact of language.

The current policy of the LOLT initially being in mother tongue for African-language learners with a later switch to English for non-language subjects appears to be consistent with the mainstream view amongst linguists that early learning should occur in the home language of learners. However, a meta-analysis of linguistics research on this matter would be helpful in determining when and how the switch to English as LOLT should be implemented. Linguistics experts should lead this research project. There is also a need to develop and provide suitable teaching materials that aid the transition to English.

There is also likely to be valuable feedback and information about preferences to be gained from parents and teachers who experience these language issues daily and are key stakeholders in the process. One might argue that many black middle class parents reveal by their choice of sending their children to English historically white schools that they believe it to be more advantageous to receive an English education to that in their home language. However, it is hard to know whether this choice is motivated by the language factor or by a perceived better overall school quality in historically white schools. A survey of parent and teacher opinion, perhaps using focus groups, is therefore recommended.

5.2.2) ENSURE HIGH QUALITY TEACHING OF ENGLISH AS FIRST ADDITIONAL LANGUAGE (FAL) IN THE FOUNDATION PHASE

Regardless of exactly when the switch to English as the LOLT should happen, there needs to be good quality teaching of English during the Foundation Phase and there need to be effective support materials for teachers and learners during the transition to English as LOLT. A positive recent policy change is that CAPS actually specifies how much time should be spent per week teaching English as FAL in the Foundation Phase. Research will be necessary to establish to what extent those teaching English at the Foundation Phase are themselves not English and are struggling to teach it, the sufficiency of existing support materials and the extent to which materials are effectively used by learners and teachers. Ultimately, the binding constraint that disadvantages African language learners may be the quality of FAL *teaching* rather than an intrinsically language related issue.

The DBE may deem the teaching of Foundation Phase English to be a critical enough stage in the overall education process that a programme to *place specialist English teachers in African language schools* should be investigated. One such teacher per school may well significantly bolster the quality of Foundation Phase English teaching that children are exposed to.

5.3) TRADE-OFFS/ RISKS

It is important to be cautious in attributing poor learner performance primarily to language practices when it is particularly difficult to disentangle the separate effects of language, socioeconomic status and school functionality. The controversy around language can also cloud the topic of school functionality as an area for reform. As Hoadley (2010: 14) cautions: “to a certain extent...debates around language deflect attention from the *quality* of instruction, irrespective of the language of instruction”.

It may be challenging to act upon the recommendations of linguistics research in ways that are feasible within the South African context and that are sensitive to cost considerations.

5.4) PHASING IN OF PROPOSALS

Short term (2 years):

- A statistical analysis of the impact of language on learner performance should be commissioned. This analysis should draw upon all available sources of data that contain both learner performance information and information on home language, the language of instruction and other language related factors. Potential sources of data include the ANA data, the Annual Survey of Schools and large scale surveys of educational achievement such as PIRLS and the NSES. This exercise should be fairly low cost and could be undertaken in a relatively short period of time.
- A more extensive investigation into Foundation Phase English teaching to learners whose home language is not English and into the implementation of the switch to English as LOLT in grade 4 should be undertaken. This should determine where the greatest areas of need are in terms of teacher competence, support materials, etc. This investigation could form part of a larger research project including a survey of parents and teachers and a review of existing local and international literature, as discussed above.

Medium term (4 years):

- Any specific policies to bolster Foundation Phase English teaching, such as placing specialist teachers in schools requiring help, would need to be informed by research such as that proposed above.

6. Improve the quality of ECD facilities

6.1) PROBLEM STATEMENT

International research on early cognitive development shows that by the time children enter formal schooling considerable gaps in cognitive ability already exist on the basis of socioeconomic status (Lee and Burkham 2002; Feinstein 2003; Heckman 2006). Learner achievement data for South Africa suggest that particularly large inequalities are evident as early as the third

grade and that the school system is not succeeding in closing such gaps thereafter. This points to the importance of early educational interventions.

Considerable increases in ECD and grade R enrolment have taken place, although the official target of universal enrolment amongst 5 year-olds has still to be achieved. A study conducted for UNICEF found that the quality of stimulation in ECD centres is incredibly varied (Van der Berg *et al*, 2010b). Many ECD facilities provide little more than child supervision and are therefore unlikely to accomplish more than keeping children out of harm's way and freeing up parents to participate in the labour market and in that way provide a better life for their children. Looking beyond the issue of access to grade R therefore, the focus should be on improving the quality of pre-school education rather than expanding a low quality of pre-schooling over more than one year. This recommendation is consistent with what the DBE has committed to in the “Delivery Agreement”.

6.2) KEY PROPOSALS

6.2.1) RESEARCH TO ESTABLISH THE NEEDS OF THE ECD SECTOR AND POINT TO POTENTIAL INTERVENTIONS

One of the difficulties in making recommendations for the ECD sector is that little concrete information exists about the needs of the sector and about best practices. Virtually all the existing research about ECD applies to developed country contexts. Given the emphasis that the DBE is correctly placing on ECD more research is critical to establish the most pressing resource needs, to review the quality and selection of ECD teachers, to understand when ECD delivers the greatest benefits and to gauge the magnitude and duration of these benefits. If, for example, it can be demonstrated that an educational performance advantage for those who attended Grade R persists to later stages of the school career this would substantially strengthen the case for devoting additional attention and resources to the ECD sector.

6.2.2) SUPPORT THE SECTOR: TRAINING, TOYS, LIBRARIES

Given the results of research about the critical resource needs of the sector it will be important to strengthen ECD centres with appropriate facilities, support materials and pedagogical training.

6.2.3) MONITOR THE SECTOR

It will be important to monitor the ECD sector more closely to avoid inefficient use of funds on institutions that are not providing service of a high standard. Currently, however, the capacity for monitoring the sector is limited. This leads to the next recommendation.

6.2.4) APPOINT ECD SPECIALISTS TO OVERSEE A CLUSTER OF ECD CENTRES

A practical solution may be to combine monitoring and support functions through the appointment of ECD specialists who provide oversight to a cluster of ECD centres. Districts may

be the appropriate unit of implementation, although smaller clusters may be deemed preferable upon closer consideration of this proposal. Specialists could sit in on lessons, offer advice afterwards, assess the specific resource needs of ECD centres and then help procure the required support materials.

6.3) TRADE-OFFS/ RISKS

Although achieving universal access to Grade R should continue to be pursued, it is crucial that a focus on quality be central from the outset. If an expansion of low quality ECD centres occurs it will probably be very difficult to improve the quality at a later stage. Effective oversight with monitoring and support will therefore be crucial.

6.4) PHASING IN OF PROPOSALS

Short term (1-2 years):

- The first step will be to commission key research. One empirical analysis should use existing sources of data to shed light on the various questions identified above. Independently of this, it will be necessary to undertake a comprehensive assessment of the critical resource and support needs experienced by ECD centres. This should be undertaken in 2012. Meanwhile, an inquiry into the possibility of appointing ECD specialists should be initiated, and if this meets with approval, the first such specialists should be appointed for 2013.

Medium term (3-4 years):

- Initially, specialists could be assigned only to some areas as a way of piloting the intervention. By 2014 or 2015 this could be more comprehensively rolled out.

CONCLUSION

The recommendations put forward in this report are largely consistent with the priorities reflected in the four output areas of the Minister's "Delivery Agreement" and in the goals (especially the five priority goals) in the DBE's "Action Plan". The report therefore primarily comes out in support of the broad vision and plans outlined in these DBE policy documents. It is intended that the specific recommendations made here will serve to strengthen and sharpen the focus of much of what the DBE is already committed to. Implementation of these recommendations will require careful planning, strong leadership and considerable political will. But without this, deep-seated educational change is merely wishful thinking.

APPENDIX: TIMELINE FOR PHASING OF PROPOSALS

	Developing capacity within the teaching force	School management for Instructional Leadership	Relationships of accountability and support	Accountability through information to parents	Improved understanding of language issues	Improve the quality of ECD facilities
2012	<p>Research into reforming the structure of teacher pay</p> <p>Randomised Control Trial to test the likely impact of a “content knowledge test reward” programme</p> <p>Research into bursary schemes to attract teaching candidates</p>	<p>Develop a plan for monitoring specific aspects of instructional leadership, such as curriculum coverage</p> <p>Experiment with categorizations of school performance using ANA 2011 data</p>	<p>Investigation into strategies promoting partnership for quality improvements with the teacher unions</p>	<p>Creative and accessible report cards with ANA results are experimented with</p>	<p>Statistical analysis of the impact of language on learner performance</p> <p>An investigation into the quality and needs of Foundation Phase teaching of English as FAL</p>	<p>Research: empirical analysis using existing data</p> <p>Stocktaking of the critical resource and support needs in the ECD sector</p> <p>Inquiry into the possibility of appointing ECD specialists to monitor and support clusters of ECD centres</p>
2013	<p>Implementation of changes to bursary scheme</p>	<p>Introduce a new and sharpened monitoring programme</p>		<p>Grade 6 ANA is externally administered and marked</p>	<p>Experimentation with placing a specialist Foundation Phase English teacher in schools</p>	<p>Appoint first batch of ECD specialists as a form of pilot</p>
2014/ 2015	<p>Implementation of teacher pay changes</p> <p>Implementation of content knowledge incentive programme</p>		<p>By 2014 specific strategies promoting partnership for quality improvements with the teacher unions should be in place</p>	<p>Grade 9 ANA’s are externally administered and marked, with a formal qualification based on the results of these tests</p>	<p>More comprehensive roll-out of the specialist Foundation Phase English teacher programme</p>	<p>Full roll-out of the “ECD specialist” intervention</p>

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