

NEEDU

National Report 2013
Teaching and Learning
in Rural Primary Schools

SUMMARY

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FURTHER INFORMATION CAN BE OBTAINED FROM:

The National Education Evaluation and Development Unit

222 Struben Street
Pretoria

Tel: (012) 357-4130/4131
Fax: (012) 323-9186

e-mail: vanstaden.a@dbe.gov.za

www.education.gov.za/NEEDU/tabid/860/Default.aspx

Education is the great engine of personal development. It is through education that the daughter of a peasant can become a doctor, that the son of a mineworker can become the head of the mine, that a child of farm workers can become the president of a great nation. It is what we make out of what we have, not what we are given, that separates one person from another.

Nelson Mandela

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1. THE NEEDU BRIEF

Needu's brief arises directly from the recommendations of the Ministerial Committee appointed by Minister Pandor in 2008 to investigate the establishment of an independent unit to evaluate the school system. The functions of NEEDU are to identify the factors that inhibit or advance school improvement; analyse and identify approaches and strategies necessary for achieving equality in the provision of quality education; evaluate the way in which provincial education departments monitor and evaluate schools; evaluate the support that schools receive from the education districts and departments; and evaluate the state of South African schools – in particular, the quality of school leadership, teaching and learning. Following this analysis, NEEDU is to make proposals for remedying shortcomings in educational practice; eliminating barriers to quality education; emulating examples of good practice; developing the knowledge and professional capacity of educators; and improving the support that education districts and departments provide to schools.

In fulfilling this brief, NEEDU's plan is to investigate all phases of schooling and all school districts over a four-year cycle. In 2012 the Foundation Phase (FP) was the focus of the evaluation of a sample of urban primary schools, and in 2013 it was decided to examine teaching and learning in the Intermediate Phase (IP) in schools in rural areas. In each province a sample of rural monograde schools was visited in the first semester and a sample of rural multigrade schools in the second. Ninety-nine monograde and 120 multigrade schools were visited over the course of the year.

2. RURAL SCHOOLING IN SOUTH AFRICA

Of the nearly 26 000 schools in South Africa, just over 13 000 are listed as being rural. This accounts for half of ordinary schools in the country. However, given the generally small size of these schools, they cater for only 5% of learners. Concerns about the particular difficulties under which rural schooling occurs led Minister of Education Naledi Pandor to establish a Ministerial Committee on Rural Education (MCRE) to conduct an investigation of this sector in 2004.

The MCRE made 82 recommendations aimed at improving the quality of rural schooling. In response, a Directorate of Rural Education was established in the Department of Education (DoE) in 2006. However, this was a short-lived initiative, which was disbanded in 2010, apparently on the assumption that many of the problems experienced by rural schools equally affected urban schools serving poor children, and that these problems were best addressed across the board.

Over the last decade government has significantly stepped up measures aimed at alleviating the poverty experienced by large numbers of South Africans. Thus, the National School Nutrition Programme (NSNP) currently provides daily meals to 9 159 773 learners (73% of the total learner population). Closely allied to the NSNP is the system of social grants, which cost the Treasury R118 billion and benefitted 15.8 million recipients in 2013/14. Non-personnel spending is skewed towards schools serving poor communities, with 60% of schools exempt from fees. With regard to infrastructure backlogs in poor schools, the Accelerated Schools Infrastructure Delivery Initiative (ASIDI) of the Department of Basic Education (DBE) aims to replace 510 inappropriate structures across the country, supply 939 schools with sanitation and 1 145 with water, and eradicate all mud schools.

In 2013 the DBE introduced a district-based programme aimed at recruiting teacher trainees from rural and poor communities to assist them in accessing Funza Lushaka bursaries, on the assumption that teachers recruited in this way are more likely to return to their rural roots to work than their urban counterparts. There is also a plan to provide special allowances for teachers working in rural schools, which has been taken up variably in the different provinces. Another set of recommendations eliciting a variable response from provinces concerns the consolidation of rural schools into larger units, accompanied by the provision of hostel accommodation for children living beyond a certain radius from the school. In some provinces, notably the Free State, a programme of hostel building is linked to the provision of staff housing.

Many of the MCRE recommendations remain as much a concern for urban schools as they are for their rural counterparts. These include the generally poor implementation of the curriculum, the need for

thorough teacher professional development, the role and capacity of districts, and the monitoring and evaluation of schools. These issues were central to NEEDU's evaluation of rural schools in 2013, the findings of which are described in the pages that follow, where they complement those derived from the urban schools visited in 2012.

3. RESEARCH DESIGN AND METHOD

The evaluations reported below have investigated the extent to which policies and practices exhibit congruence between successive layers of the system. The nested structure of schooling assumes that these levels interact to assist teachers to nurture learning in their classes. We use the notion of instructional leadership to guide our investigation into these interactions in 34 cross-sections through the South African school system, commencing with the national DBE, and proceeding via provinces, districts and schools to teachers and learners in their classrooms. A team from NEEDU head office spent one day in each of the provincial and district offices selected for evaluation. A two-person team then visited each of the eight schools sampled in the district for two days.

Buildings were in a poor state in 9% of monograde and 7% of multigrade schools seen. In addition, in many of the schools in which buildings were considered adequate, the state of the toilets was unacceptable. This meant that toilets were of the pit variety or in a poor state of repair and unsanitary. This was the case in 34% of monograde and 42% of multigrade schools.

The state of poverty prevalent in the communities served by the schools visited is reflected in the fact that in 87% of both subsets of the sample all the learners were beneficiaries of the NSNP. Nearly two-thirds of multigrade schools cater for 100 pupils or fewer, and only 16% contain more than 150. Typically, these are very small institutions staffed by three or four teachers, including the principal, where most teachers work with learners at two or three distinct grade levels in the same class. Two-thirds of the multigrade schools visited were served by four teachers or fewer. In contrast, only 41% of monograde schools contained 500 learners or fewer, while one-fifth of these schools were large, catering for over 1000.

Each school visited received a draft school report with recommendations to the school management and teachers, based on the evaluation of the school. After engagement with the school the report was finalised and sent to the school. A composite district report was then written, containing an overview of the findings from the schools, the district office and the provincial head office. These reports were first submitted to the district and province for comment before finalisation. The *NEEDU National Report 2013* reflects the consolidated findings from the 34 composite district reports, together with findings from discussions with officials in the DBE and analysis of a range of documents.

4. INSTRUCTIONAL LEADERSHIP

Instructional leadership may be thought of as the ensemble of processes, operating at the different levels of schooling, directed at leading the system to improved quality. In the following discussion we examine the state of these instructional leadership processes in the 219 rural schools visited by NEEDU in 2013 and their district, provincial and national support structures.

4.1. PLANNING

The administration that took office in central government in 2009 started its programme by setting out 12 priority outcomes. Outcome 1 is 'Improved quality of basic education'. The DBE's programme for achieving Outcome 1 commenced with the declaration of *Schooling 2025* and the formulation of the *Action Plan to 2014: Towards the Realisation of Schooling 2025*, which lays out 27 goals for schooling. Goals 1 to 13 deal with desirable outputs in relation to learning and enrolments, while Goals 14 to 27 target activities that must be performed to achieve the 13 output goals. This framework provides the matrix for provincial plans and reporting procedures, down to school level.

In over three-quarters of schools visited by NEEDU in 2013, school improvement plans (SIPs) were available for examination, but in the majority of cases the SIPs were of poor quality and insufficiently detailed to provide any practical guidance to curriculum delivery. This illustrates the difficulties involved in rolling out a set of national priorities to some 26 000 schools spread across the country. It also illustrates the difference between instructional leadership that 'goes through the motions', for purposes of compliance, in contrast to leadership that engages with the substantive issues of teaching and learning.

4.2. ALLOCATING AND DISTRIBUTING RESOURCES

School planning in provincial offices starts with the annual post provisioning exercise, by means of which the total basket of posts is fixed for the year ahead, and posts allocated to institutions. Teachers are the most important component of effective schooling. Yet teachers cannot function without classrooms to shelter the process of teaching and learning from the elements, or books without which reading and writing are not possible, to name just two of the most obvious non-personnel resources. It is all very well to replace inappropriate structures in rural areas with beautiful new buildings, as the ASIDI programme is doing, but if money is not allocated to maintaining the buildings, new schools will soon be indistinguishable from those they replaced.

The 1998 *National Norms and Standards for School Funding* (NNSF) regulations set a target 'of the order of 80:20' for personnel to non-personnel costs. The NNSF also set a target ratio of 85:15 for the balance between educators and support staff, to be achieved by 2005. A report released by the DBE in 2013, the *Deloitte Report*, indicates that most provinces pay little heed to these norms (Table 1).

Table 1: Personnel to non-personnel expenditure by province

Province	2010/11	2011/12	2012/13
Eastern Cape	84:16	89:11	90:10
Free State	85:15	86:14	89:11
Gauteng	79:21	80:20	81:19
KwaZulu-Natal	89:11	83:17	84:16
Limpopo	86:14	91:09	93:07
Mpumalanga	85:15	87:13	87:13
Northern Cape	82:18	83:17	87:13
North West	84:16	86:14	86:14
Western Cape	83:17	83:17	83:17
Total	83:17	85:15	86:14

It is clear from Table 1 why the Eastern Cape and Limpopo Departments of Education are under administration by the MBE in terms of section 100 of the Constitution. These provinces have lost control of the post provisioning process, pushing the personnel to non-personnel ratio past 90%. On the whole, Table 1 does not present a picture of a healthy balance between personnel and other costs, with personnel costs in the Free State, Mpumalanga, Northern Cape and North West closing in on 90%, and the national average creeping to over 86%.

Establishing the basket of posts for any province is a complex procedure, which is influenced by the degree of urbanisation of the province and historical decisions with respect to school management. For example, the Eastern Cape is a predominantly rural province in which large numbers of isolated small schools each serves a few learners. Consequently, the province has the lowest learner-to-school ratio (LSR = 338) and educator-to-school ratio (ESR = 11.4). In contrast, Gauteng, with its high population density and small land area, has by far the highest LSR (924) and ESR (28.9).

A primary factor that bedevils post provisioning is the high rate of population migration, both within and between provinces. Rural areas are becoming depopulated, with a consequent declining demand for schools and teachers, while towns and cities are gaining learners, requiring more schools and teachers. Migration patterns are not simple, being subject to seasonal variations and other reflux movements back to the rural areas. Nevertheless, the net movement is away from rural areas. Under these circumstances

the logical response is to move teachers from schools that are losing learners to those in which there is a net gain.

However, in the face of strong teacher resistance, provincial departments of education find it very difficult to keep up with the flow of learners. Instead, temporary posts are created in the school to which the posts should move, new teachers are hired against the temporary posts and the teachers rendered 'in excess' are 'double parked'. This is a significant phenomenon in all provinces, with temporary teachers constituting 11% of the total. The effect of these practices is to lower LER ratios and push up personnel costs. An affordable post establishment is one that gets close to the 80:20 and 85:15 ratios and fits into the available budget. The *Deloitte Report* concludes that where provinces start the process at the wrong end – aiming to keep the total number of teachers constant or rising – it is primarily due to pressure by unions.

A third factor complicating the post provisioning process is rising wage costs. Over the five-year period from 2007 to 2012, average annual increases in the personnel expenditure of provinces ranged from 11% to 16%. The overall effect of these increases is that salaries increased by twice the rate of the rise in the cost of living over this period. Disaggregation of these increases shows the major effect of the occupation-specific dispensation (OSD) agreed with the unions in 2007. What makes this factor difficult for the DBE and provinces to plan for is that wages are set at the level of the public service as a whole. Above-inflation increases over a number of years is placing a cumulative stress on the budgets of provincial departments of education (PDEs) and a number of provinces, including some whose personnel expenditure ratio is close to 80%, were experiencing budget distress at the time of writing.

Timely and accurate information is key to a post provisioning process that secures the optimal balance between personnel and non-personnel costs and between educators and support staff, all within budget. It goes without saying that the successful construction of an affordable post establishment by September every year is heavily dependent on reliable information across a host of variables, including the distribution of educators and support staff within each province, the salary profiles of personnel and, most important, learner movement. The data needs to undergo a modelling exercise before it is of use in making decisions about post allocations. The DBE is setting up the South African School Administration and Management System network to connect schools to districts, provinces and the national office. Although the process is well advanced, there is some way to go before it will provide information at the levels of validity, reliability and frequency required to manage the post provisioning process more effectively.

4.3. RECRUITMENT, PROMOTION AND EMPLOYMENT CONTINUITY

After post provisioning, the second human resource management tool PDEs have at their disposal to influence the extent and quality of schooling is the approach they adopt to staff recruitment and promotion. Throughout the school system, capacity constraints at all levels inhibit curriculum delivery. In many schools teachers with poor subject knowledge receive little help from school leaders, whose own knowledge resources are little stronger. School-level heads of department (HODs) and principals, in turn, are promoted to positions in circuits, districts and provinces without necessarily exhibiting superior subject knowledge, pedagogical skills or management capacity.

A large part of the problem is that there is pressure to appoint officials to promotion posts using considerations other than merit. Yet examples of exemplary practices are also found. Perhaps the most striking example of excellent leadership encountered by NEEDU in 2013 was seen in District Z (Box 1). This is a case study of a district undergoing a dramatic change in fortune over a short period, under the powerful influence of a very dynamic leader, the redoubtable Mr X.

Box 1: Dynamic leadership resolves conflict in District Z

District Z, serving mostly rural schools in a former homeland, had been chronically underperforming on the National Senior Certificate and by 2009 the average pass rate stood at 28%. NEEDU visited the district in 2013, and found a new district director in her second month in the job. She explained that the area encompassing the district had a long history of political contestation and that she spent an inordinate amount of her time dealing with conflict management in schools. Because of a dispute between the union and district office concerning the filling of top posts, teachers had been ordered by

the union to 'disengage' from district activities and not to allow officials to visit schools. Nevertheless, the fact that she had been appointed from another province indicated that the province was determined to move beyond the parochialism had dominated appointments in the past.

It seems that the critical moment in the turnaround of the district occurred through the inspirational leadership of Mr X, the highly regarded director of the neighbouring district. In May 2010, the province suspended the director of District Z and approached Mr X to spend six months getting the district get back on its feet, without relinquishing responsibility for his own district. Mr X, interviewed by NEEDU in September 2013, takes up the story, in response to questions about how he had gone about this very challenging task.

The next day I visited a school which had a 3% pass rate. Learners were outside when I got there and four teachers were absent. All the teachers were sitting in the staffroom. Only one teacher (from Swaziland) was ready to teach. I told the principal that she was not ready to lead and that she should stay in the district office from the next day and not come back to school. I brought a new principal, who is still there now, who was a very good HOD in another school. At the end of the year, the pass rate was 71%.

The following day I went to another school, where the pass rate was 16%. I asked the principal why learners were failing. She complained about stress, non-cooperation from SGB, etc. I said to her that I'd come to take her out of the school and my job was to get a new principal. She was so relieved she wanted to call the whole school to tell them. I said, no, when we have good news we will tell them. I told the deputy to stand in and brought a new principal after two weeks, who is still there and the school is performing at 80%.

The NEEDU interviewer then asked Mr X how he had managed to forge a better relationship with the unions. He replied:

SADTU had declared a non-engagement with the district. Union officials were not working with district officials. I called the [SADTU] chairperson and met them in the evening, to discuss. I asked them what they want. They would say: 'Hey, meneer, give so-and-so the HOD post, he's good'. But they meant he's good in the branch meeting, not the classroom. I changed their attitude, they understood me. They were talking about broad issues that have nothing to do with the classroom. I focused them on the curriculum, brought sense into the discussions. Set targets, timeframes. I worked nicely with them, they respect me. I changed their attitude.

One lesson from this example is that in a climate of union militancy, in this case accompanied by political instability in the region, teachers and their curricular concerns are collateral victims in a battle between the union and government around promotion posts. What Mr X shows – through a combination of personal charisma, knowledge of the law, and a clear understanding of the purpose of schooling – is that skillful leadership can challenge predatory activity on the part of private interests with confidence and success, while avoiding the political terrain.

Internal discussions within the DBE on how to improve the selection of school principals reflect concern about inadequate selection and interviewing skills in some of the school governing bodies (SGBs), leading to the inappropriate appointment of many principals. These discussions take as their starting point a recommendation in the National Development Plan calling for a change in the appointment process of principals to ensure that appropriately qualified and competent individuals are attracted to become school principals. The DBE is exploring the possibility that for all senior management positions, but particularly that of principal, candidates should undergo a competency assessment to determine their suitability for the post and to identify areas in which they might require development and support.

4.4. TIME MANAGEMENT

Late-coming among learners was more of a problem at monograde schools visited by NEEDU in 2013 (a major problem in 40% and moderate problem in 35%) than in their multigrade counterparts (16% and 22%, respectively). Among teachers, punctuality in the mornings was reported to be a significant problem in only 8-14% of schools. However, absenteeism was found to be a more significant factor among teachers in monograde schools (24% serious or moderate) compared to multigrade schools (13%).

Absenteeism among learners was a moderate to serious problem in around 40% of schools of both types. Regarding extracurricular disruptions to the timetable, this is a major problem in both kinds of schools, described by principals and teachers as frequent in 28% of monograde and 29% of multigrade schools. These figures indicate that time is less well used in rural schools than was the case in the urban schools visited in 2012.

4.5. LANGUAGE

In contrast to the urban schools visited by NEEDU in 2012, which exhibited generally high levels of language heterogeneity, in most of the multigrade schools¹ visited in 2013 most learners spoke the same language, and in the large majority of cases this was also the home language of their teachers. Although there were exceptional cases of language complexity, the problem of more than one home language spoken by learners in one class is not nearly as prevalent a phenomenon in the rural schools visited by NEEDU as it was in the urban schools.

However, problems related to the changeover to English in the IP were found to be more pronounced in these rural schools. Of even greater concern was the fact that while 90% of monograde and 92% of multigrade schools visited said that the changeover posed a serious problem to teachers and learners alike, only 22% of monograde and 16% of multigrade principals said they had a programme aimed at addressing this issue.

4.6. BOOKS

It seems that most schools do not understand the importance of structured reading material, with only 29% of monograde and 23% of multigrade schools having an adequate supply of readers for IP learners. Graded readers provide a structured progression, guiding learners through progressively more complex texts while providing sufficient practice at each stage of the process. It is essential that these be written from scratch in each language, since every language has its own characteristic set of sounds and common words. While the national catalogue has many books in all official languages, labelled as graded readers, a recent evaluation of a wide spectrum of these materials led to the conclusion that many of them were not satisfactory, largely because they had been translated from English. Another study found that translations were implemented without any cognisance of the structural features of the African languages, thus losing the element of grading and resulting in long, often complicated words and phrases, made up of many letters and syllables.

With regard to mathematics textbooks, only 41% of monograde and 50% of multigrade schools visited by NEEDU in 2013 issued texts to all learners in the IP. More encouragingly, 75% of monograde schools issued language textbooks, but only 44% of multigrade schools did the same.

Part of the lack of understanding of the importance of books is the practice of not permitting books to leave the school. Thus only 62% of monograde and 35% of multigrade schools allowed learners to take books home. Similarly, while 82% of monograde schools had a book retrieval system, only 42% of multigrade schools did.

Against this background, the DBE workbook project is a critically important resource. Nearly 24 million language and mathematics books were distributed to children in Grades 1-9 across the country for the start of the 2013 school year. By February Book 1 (for use in the 1st semester) had been delivered to 98% of schools, and Book 2 (2nd semester) to 97%. NEEDU data collected in 2012 and 2013 corroborates these claims. A good supply of books is now in place and the focus needs to move to effective use.

4.7. MONITORING

The volume of data issuing from the DBE has been steadily increasing over the past two decades and the rate has assumed a sharply upward gradient in the last five years. The ready availability of data, in turn,

¹ This data was not collected from the monograde schools.

has stimulated analysis and a host of reports on trends with respect to key indicators formulated in the *Action Plan*. These gains in the field of data generation and analysis are important advances, allowing access for secondary analysis to any party through the DBE website. However, like all positive developments, the gains also bring heightened expectations. One of these is best expressed by the DBE *Country Report*, which concludes that in the quest for more evidence-based education planning in South Africa, insufficient utilisation of data is a more serious problem than the quality or the availability of data.

At district and circuit levels, circuit managers (CMs) are the officials responsible for ensuring that schools function smoothly and provide the conditions necessary for learning. CMs are relatively well supplied and in all districts visited by NEEDU in 2013 the ratio of CMs to schools was in the order of between 1:25 and 1:40, with the high end of this range occurring only where there were vacancies in the district office. The first feature of well-run institutions is the effective use of time. NEEDU evaluators saw many schools in which this was the case, and in some cases it was clear that schools had a good relationship with their CM and that this further enhanced institutional strength. However, the discussion above indicates that time is wasted more freely in these rural schools than was the case with NEEDU's sample of 133 urban schools seen in 2012. While achieving greater efficiency in time usage is the responsibility of the principal in the first instance, where the principal is doing a mediocre job, the CM becomes accountable and must act.

Subject advisors (SAs) are responsible for working with SMT members and teachers in guiding curriculum delivery. SAs are distributed unevenly, with a strong skewing towards working with high schools and the Further Education and Training (FET) phase in particular. Under these circumstances, the question has to be asked as to the appropriateness of the current model of SA intervention, which assumes the SAs can make an impact on teacher effectiveness, working with teachers directly in their schools. The low ratio of SAs to schools, not uncommonly in the range 100-200 for primary schools, means that their impact on individual schools and teachers will inevitably be very light. It is recommended that SAs work primarily with HODs rather than trying to reach teachers directly.

One factor identified by a majority of SAs interviewed by NEEDU as an important indicator of curriculum delivery was learner writing, and these SAs all said they examined learner exercise books to compare writing quality against the Curriculum and Policy Statement (CAPS) specifications. Members of the school management team (SMT) and teachers were also asked whether writing was monitored. Here too the response was overwhelmingly positive, except in many multigrade schools, which do not have formal SMTs and where the principal and other senior teachers generally have full teaching loads. However, the bigger problem regarding monitoring writing is that while it seems that SAs and SMT members go through the motions, it is clear from the quantity and quality of learner writing seen in these schools that this is another key leadership function that is carried out in a superficial manner.

No mention was made of monitoring reading on the part of SAs and school-level leaders. Very few HODs considered it important to listen to learners reading. Thus, the most fundamental capacity to be learned in primary schools – reading with comprehension – is left unmonitored in the majority of schools.

A final component of monitoring involves classroom observation of teachers at work to identify good practice that could be generalised within the school, and weaknesses that require support. However, it seems that while formalisation of this process through the Integrated Quality Management System (IQMS) takes up considerable time and energy in schools, this is another exercise observed more in the surface formalities than in substantive engagement with professional appraisal and development. The point is illustrated by an analysis of the IQMS process for 2012, which concluded that of the 446 395 educators rated, 69.7% were scored as 'good' or 'outstanding', while a further 29.8% were rated as meeting minimum requirements. The performance of a mere 0.59% was considered 'unacceptable'. These figures are diametrically at odds with conclusive evidence over the last decade that South African scores on comparative reading and mathematics tests fall well below those of a number of much poorer countries. The question has to be asked how the overwhelming majority of teachers can be deemed to be performing very well, while systemic performance is so poor.

The Ministerial Committee appointed to investigate the establishment of NEEDU examined the anomaly between poor school performance and high teacher ratings on IQMS. One of the factors identified by the Committee as being responsible for this gap was that the criteria for evaluating teacher performance do not include measures identified in the research literature as constituting effective teaching, such as time on task, appropriate use of textbooks and materials, good communication, motivation and the importance of positive feedback. The Committee further noted that the existing list of performance standards is cumbersome and time-consuming, generating considerable volumes of paperwork for HODs, and does not capture adequately the most important core function of schooling, namely the level of learning

achieved by learners. In short, the evaluation instruments do not allow school leaders to identify and probe the real factors that drive performance.

During their visits to schools in 2013, NEEDU evaluators asked both SMT members and teachers whether classroom observations of teachers were undertaken, outside of the IQMS process. The results indicated that, at best, SMT members observed teachers in their classrooms in no more than half of the schools visited. The most common reason advanced by SMT members and teachers alike for why this did not happen was that SMT members were too busy to undertake classroom observations. Many also said that it was union policy not to allow SMT members into members' classrooms.

4.8. THE ANNUAL NATIONAL ASSESSMENT

The Annual National Assessment (ANA) tests form an important part of government's plan to improve schooling. The tests are intended to monitor progress towards the targets set for the system, and to serve as diagnostic instruments to identify areas of the curriculum requiring particular attention.

The DBE's report on the 2013 administration of ANA conceded that much needs to be done to strengthen the reliability and validity of the data before it can be used with any confidence to monitor trends in performance over time. A large part of the problem lies in ensuring that the tests are strictly comparable from one year to the next, a situation that did not pertain in 2013. In the *NEEDU 2012 Report* we described how the tests were having a positive effect on teaching and learning in schools, but expressed reservations as to whether a single set of tests could serve both as diagnostic tools for teachers and as measures of systemic progress. Those features of the tests that make them suitable for diagnostic purposes – the fact that the items are seen by teachers – make them difficult to render comparable, and hence unsuitable for measuring systemic progress.

An important step forward for ANA in 2013 was the introduction of a verification exercise through which a sample (9%) of schools was monitored during test administration, and the scoring and analysis done by an independent contractor. A comparison of mean scores for tests administered and marked by teachers with those administered externally revealed relatively small differences. The reason why the verification exercise is important is that these tests are not seen by teachers, and hence the same tests, or at least significant parts, can be used year after year, rendering them very suitable for measuring change over time. It is recommended that the verification exercise should serve as a measure of systemic progress and that the universal exercise be used solely by teachers and schools for diagnostic purposes.

The provincial education departments are all well aware of the diagnostic potential of ANA and are putting plans in place to activate this potential at school level. The approach of the Free State Department of Education (FSDE) seemed to be more successful than most in facilitating the effective use in schools of ANA results (Box 3). However, in most provinces, there is some way to go before these efforts begin to gain traction at school level. NEEDU evaluators asked both SMT members and teachers how the ANA scores were used at the school. In only 5% of monograde and 3% of multigrade schools visited did NEEDU evaluators find evidence that school leaders and teachers were using the scores to guide teaching. A further 37% of both mono- and multigrade schools said they were using the results, but it was clear that, at best, this meant taking cognisance of only the average scores to motivate greater effort in a general sense. These figures indicate that schools are becoming aware of the potential of ANA, but are not yet in a position to put this potential to much use. Nearly 60% of schools in the NEEDU sample were not attempting to use the scores at all. It is obvious that teachers and school leaders need more specific guidance on how to capture and analyse the ANA scores and how to use the results productively in their classrooms.

4.9. PROGRAMMES TO IMPROVE THE QUALITY OF READING INSTRUCTION IN PRIMARY SCHOOLS

The DBE is pursuing a number of initiatives aimed at achieving the goals of the *Action Plan to 2014*. We focus here on attempts to improve the teaching of literacy and mathematics, and of reading in particular, in the General Education and Training phase. The *National Reading Strategy Grades R-12* (NRS) was developed by the DoE in 2008 as a national strategy to address the growing concern over illiteracy, and to promote a nation of life-long readers and life-long learners. The NRS was closely followed by the *Integrated National Literacy and Numeracy Strategy* (INLNS), a high-level plan that aims to direct and

integrate provincial initiatives, which in turn are expected to provide detailed plans for districts and schools 'down to the classroom level'.

In the *NEEDU 2012 National Report* the Literacy and Numeracy Intervention (LNI) of the Western Cape Education Department and the Gauteng Primary Literacy and Mathematics Strategy (GPLMS) of the Gauteng Department of Education were discussed in some detail. Both have been in operation for at least three years, yet neither has been able to demonstrate impact on learner performance to date. Both have recorded significant learning gains in classes benefiting from their interventions, but neither can demonstrate convincingly that these effects are due to the respective programmes. In the case of the LNI the problem is one of evaluation design, which lacks a counterfactual, or comparison group. In the case of the GPLMS, significant learning gains on the ANA tests were recorded by classes receiving the programme, but this may have been due to changes in the tests between the two sets of measurements. The last point illustrates the importance of first ensuring that the ANA tests, or at least the verification component, are strictly comparable from one year to the next. Second, in order to render the verification ANA suitable for measuring system-level change at the provincial level, it must work with a sufficiently large sample. Finally, evaluations must be designed prior to implementation and contain controls that enable confident comparison of treatments. Box 2 describes how a rigorous evaluation of the Systematic Method for Reading Success (SMRS) provided unambiguous conclusions about the value of the programme.

Box 2: The Systematic Method for Reading Success

The SMRS assumes that the best way to motivate lifelong reading is to ensure that learners are successful and excited as they learn the reading process. A central idea is that learners should read successfully from the first day of school, in their home languages, using their names as their first sight words. This is a structured programme by means of which learners are systematically introduced to letter sounds, blending sounds into words, recognising sight words, learning vocabulary and comprehension skills through teacher read-alouds, then reading words in decodable and predictable stories. The programme is designed in a scripted format in a teacher's manual so that teachers with little preparation in reading instruction can teach it.

The SMRS was implemented in Grade 1 classes in 30 South African schools spread over three provinces in 2009. It was adapted to the local languages for each of three provinces: North West, Limpopo and Mpumalanga. A pre-test/post-test, treatment/control evaluation design was used to assess the effects of the SMRS on learning in Grade 1 classrooms in 10 treatment and five control schools in each of the provinces. The Early Grade Reading Assessment (EGRA) tests were used to assess learners' reading abilities before and after the intervention.

The evaluation concluded that the SMRS programme had a large impact on learner achievement in letter sounding fluency, word identification fluency, oral reading fluency and reading comprehension after only four months of implementation, giving learners in treatment schools the ability to take a 'great leap forward towards accessing print and the written word'.

Evidence is gathering to indicate that provincial activity is being stimulated and directed by the DBE, through the INLNS. However, apart from the LNI and GPLMS, most of these initiatives are in the early stages of development. Of longer duration is the Lit/Num Strategy of the FSDE, a programme that is maturing into a province-wide programme with considerable purchase at school level. A key design element is that monitoring and support are closely linked: analysis of ANA results leads to the identification of teacher needs, which are developed through materials and training closely aligned to the kinds of items in the tests (Box 3).

Box 3: Combining monitoring and support in the Lit/Num Strategy of the FSDE

The approach adopted by the FSDE is unique in both its content and in the way it uses a very simple tool to give coherence to what otherwise might be a loose collection of disparate activities. The coordinating tool is the Subject Academic Improvement Plan (SAIP), which is derived through an error analysis of the ANA scores. The analysis is done by the province shortly after the tests have been

written and then taken on a 'road show' early in the new year, led by the Member of the Executive Council (MEC), to centres around the province and discussed with schools, SGBs and union representatives. Schools are given guidance on how to craft their SIPs. In this way, the SAIP provides a mechanism for analysing weaknesses, setting targets and providing support to each school. An important part of the programme is to get schools and teachers to take responsibility for the performance of their learners.

A number of different forms of support revolve around the axis formed by the SAIP. At primary school level, these include:

- Spelling Bees and mental mathematics competitions.
- An increase in the number of SAs and equipping them with laptops and 3G cards to facilitate communication and research.
- The development of training programmes for teachers.
- The provision of incentives for successful teachers, including iPads, laptops, TV sets and grocery cheques.

The Chief Director for Curriculum in the provincial office described how the reading programme was formulated, through discussions among SAs about successful strategies they had used in their classes. The aim is to get all Grade 1 learners to write simple sentences by the end of the year, and to develop a phonics programme for use in the FP. The resulting strategy was written up and versioned in the different provincial languages. The most literate 200 Grade 1 and 2 learners were commissioned to compose illustrated story books, which were printed and made available to all schools. The best teachers in each region were identified by their peers and they then led teacher development workshops for surrounding schools.

The purpose of the *Maths 4 All* campaign is to instil positive attitudes to mathematics and encourage learners to take mathematics at FET level. The campaign aims to "highlight the beauty, utility and applicability of mathematics", and to debunk the myth that mathematics is a difficult, cold, abstract subject only accessible to a few. Mathematics laboratories have been established in 150 schools, providing learners with opportunities to use high-quality educational software to deepen their knowledge of mathematical concepts. Over the next few years, the intention is to extend the programme to 750 schools. Other elements of the *Maths 4 All* programme include awarding bursaries to primary school teachers (including those responsible for teaching FP classes) to enable them to specialise in the teaching of mathematics.

Literacy and numeracy instruction in the country is in a state of flux. While awareness about the importance of basic instruction is high, progress in understanding the best approach to take is proving to be slow. Each province seems to be in the process of inventing its own programme, with little evidence from the field to give direction. Consequently, catch-all, eclectic designs predominate. Problems of evaluation design, or no evaluation at all, obscure the lessons to be learnt. While there is evidence of progress running through certain programmes – from the *Foundations for Learning Campaign* to CAPS, for example – there are distinct gaps in policy continuity, with the SMRS and EGRA taken no further after showing considerable promise. Yet, as we confirm below, reading, writing and calculating capacities in primary schools are poor and the most urgent need for the country's education system is to find a way to improve these foundation skills.

4.10. IN-SERVICE TEACHER DEVELOPMENT

The 2012 *NEEDU Report* provided evidence from the Southern and East African Consortium for Monitoring Educational Quality (SACMEQ) 2010 study of the low levels of subject knowledge among the country's Grade 6 mathematics and language teachers. The DBE's *Country Report* uses the same data to show that, whereas in most of the 14 participating African countries there is little difference between the content knowledge of urban and rural teachers, in South Africa there is a marked difference. The content knowledge of South African mathematics teachers in rural areas is second from the bottom, better only than scores for rural Zambian teachers.

A great deal has been happening in teacher education and development since the establishment of the Department of Higher Education and Training (DHET) in 2009 and the publication of the *Integrated Strategic Planning Framework* in 2011. On the question of in-service training (INSET) the DBE reports figures that are quantitatively very impressive. In preparation for the implementation of CAPS, 6 633 SAs have been trained and over 300 000 teachers oriented to the new curriculum over the last three years.

An important recent development with respect to INSET is the Teacher Union Collaboration struck between the Minister of Basic Education (MBE) and the organised teaching profession. Professional development institutes have been established by the three largest unions, and approximately 80 000 teachers have been trained in priority areas. A partnership with the British Council has enabled the DBE to facilitate the attendance of 240 SAs and 70 lead teachers of the Certificate in Primary English Language Teaching and Certificate in Secondary English Language Teaching courses. Five provinces have begun training teachers on the courses. The DBE has also initiated a process of strengthening provincial teacher development institutes and district-based teacher centres to support teachers at local level. Teacher centres are in the process of being equipped with information and communication technology equipment and trained staff

In reporting this welter of INSET activity, the DBE notes that although the proportion of teachers deemed to be qualified (matric + three years) rose from 54% in 1995 to 95% at present, this did not lead to the expected changes in learner performance across the system. This fact gives cause for grave concern regarding the quality of INSET, a problem that the MBE and provincial MECs have been aware of for some time. In August 2008, for example, the Council of Education Ministers meeting issued a statement discouraging universities from offering new Advanced Certificate of Education (ACE) courses. The Council noted that the DoE had conducted a survey that showed an 'unseemly proliferation' of ACEs, most of which were not being used for their original purpose of improving teachers' subject content knowledge.

4.11. INITIAL TEACHER EDUCATION

Regarding initial teacher education (ITE), the introduction of the Funza Lushaka bursary programme has led to a very significant upsurge in the numbers of students entering teacher education courses. As a result, headcount enrolments in ITE in public universities increased from 35 275 in 2008 to 94 637 in 2012, while the number of graduates grew from 5 939 in 2008 to 13 740 in 2012. The plan is to produce 20 000 new teachers annually by 2019. This goal will be supported by the expansion of infrastructure at existing universities and opening new institutions in the Northern Cape, Mpumalanga and elsewhere. As a result of this increased interest among students, a number of universities have been able to increase the entrance requirements for prospective teachers, a very positive move in the interests of increased quality of newly qualified teachers.

However, the quality of newly qualified teachers remains unknown. DHET has issued the *Minimum Standards for Teacher Education Qualifications*, according to which universities are required to redesign their programmes. While policy of this kind may specify certain parameters to be met, the extent to which it is able to mandate quality remains questionable. The last review of the sector by the Council on Higher Education (CHE) revealed that the quality of programmes offered by many institutions leaves much to be desired. Given the fact that the impact of INSET programmes has been disappointing, the quality of ITE is key to the state of teacher knowledge and skills, and hence of learning outcomes. For this reason, it is important that a concerted investigation by all parties concerned – government, the universities, the CHE, the South African Council for Educators (SACE) and the teacher unions – into the quality of ITE be undertaken.

4.12. IN-SCHOOL PROFESSIONAL DEVELOPMENT

The purpose of monitoring teaching practices and learning outcomes on the part of the SMT is to identify strengths and weaknesses in the school in order to build capacity. In most schools there is little or no contact between teachers on matters of curriculum, pedagogy and assessment. Teachers work in isolation behind closed classroom doors. Under these circumstances there is little room for improvement. Teachers using ineffective practices cannot learn anything new, while any potential for the best teachers to share what they do is lost. A primary function of the SMT is to facilitate the cross-pollination of ideas and practices within the school, and all instructional leadership practices should be directed at this aim.

While SAs do their best under the circumstances, they are too thinly spread and the needs of many teachers so deep that support to schools from the district cannot have much more than superficial effects on school practices. Subject advisors should prioritise the development of school-level HODs, in order to assist HODs to maintain an in-school professional development climate. Clearly, this is an idea that has not found purchase in South African schools, with 83% of monograde and 87% of multigrade schools visited by NEEDU in 2013 saying they had experienced no such activities in their schools.

5. PRACTICES AND LEARNING OUTCOMES IN THE SCHOOLS VISITED

5.1. MULTIGRADE TEACHING

NEEDU evaluators observed one lesson in each of the multigrade schools visited. The purpose was to assess the extent to which meaningful differentiation occurred, which provided appropriate instruction for learners in each of the grades in the class. It was found that there was some degree of differentiated teaching in 41% of classes observed, but this seemed to be effective in only 11%. This means that most teachers observed made no attempt to provide different learning experiences, appropriate to each of the respective grade levels incorporated into the class. In other words, in 59% of these classes, teachers presented the same material and the same exercise to all children, regardless of their ages and grade levels.

No individual reading on the part of learners was seen in 83% of classes, no independent writing in 90%, while in only 5% of classes were learners seen to be asking questions. These are common features of South African classrooms in both urban and rural schools. The first feature that struck the NEEDU investigators is that the pacing of the lessons maintained by teachers is painfully slow, which explains the very low quantities of writing observed in learner books. Second, and just as destructive, is the fact that children in these classes are steadily being socialised into passive recipients, subservient to whatever the teacher provides. They are not being developed into inquisitive, independent seekers of knowledge, but are taught to wait patiently while the authority figure doles out the most meagre quantities of activities to stimulate their interest.

5.2. PERFORMANCE

The ANA averages for mathematics, home language (HL) and first additional language (FAL) in the rural schools visited by NEEDU in 2013 are all well below the national scores (Table 2). The multigrade schools, as a group, outperform the monograde subsample in all three subjects, possibly because teachers pay closer attention to individual learners in these small schools.

Table 2: ANA scores for NEEDU schools, Grade 6, 2013 (average percentage correct)

	Mathematics	Home Language	First Additional Language
Monograde	23.41	33.46	35.58
Multigrade	30.97	37.35	40.84
Total NEEDU sample	27.37	35.41	38.38
National average	39.00	58.80	45.70

5.3. READING FLUENCY AND COMPREHENSION

In line with focus on the IP in 2013, NEEDU undertook a systematic analysis of reading performance in Grade 5. Reading comprehension is periodically tested at this level by both the Progress in International Reading Literacy Study and SACMEQ, and the poor state of reading capacity among the IP population of South African learners is well known. However, reading fluency has not been assessed to any extent. Indeed, NEEDU's 2013 evaluation of rural schools revealed that reading fluency is a blind spot not only within the schools visited, but also among SAs. There is no culture of listening to learners reading. Therefore, the central focus of the 2013 NEEDU reading study was reading fluency, assessed by means of two oral reading fluency (ORF) tests constructed for the purpose. At the same time, the study assessed reading comprehension by means of a written test consisting of two passages. Both tests were conducted in English, since this is the language of learning and teaching (LOLT) of the large majority of South African learners in the IP.

In monograde schools, one entire Grade 5 class was randomly selected to be tested through a written reading comprehension test. Based on the comprehension scores, the top three, middle four and bottom three learners were then sampled for the first reading fluency test (ORF1). In the case of the multigrade schools, the learner numbers were small enough to test the entire class for reading fluency, regardless of their achievement in the comprehension test. Of the 1 790 learners tested on the first passage, 878 (i.e. 49%) read sufficiently well (more than 50 words correct per minute, WCPM) to be tested on a second, slightly more difficult reading passage (ORF2).

The average reading comprehension score across the sample was 4.14 out of 20 (20.72%). Grade 5 learners in multigrade schools performed marginally better than their monograde peers. Six percent of the sample achieved a score of zero out of 20, and a further 69% achieved 5 or less on the written comprehension test. Only 6% achieved a score of more than 10 out of 20, suggesting very few learners were able to comprehend adequately what they read.

The average ORF for learners tested on the first reading test was 46.64 WCPM. For learners who progressed to the second passage, the average ORF increased to 79.09 WCPM. The distribution of scores on both tests is shown in Figure 1. In addition to the ORF tests, the learners were asked five questions pertaining to the parts of the respective passage that they had read to test their comprehension. The average score for the learners who read the first passage was just over one question correct, and this hardly improved with the learners who read sufficiently fluently to read the second passage.

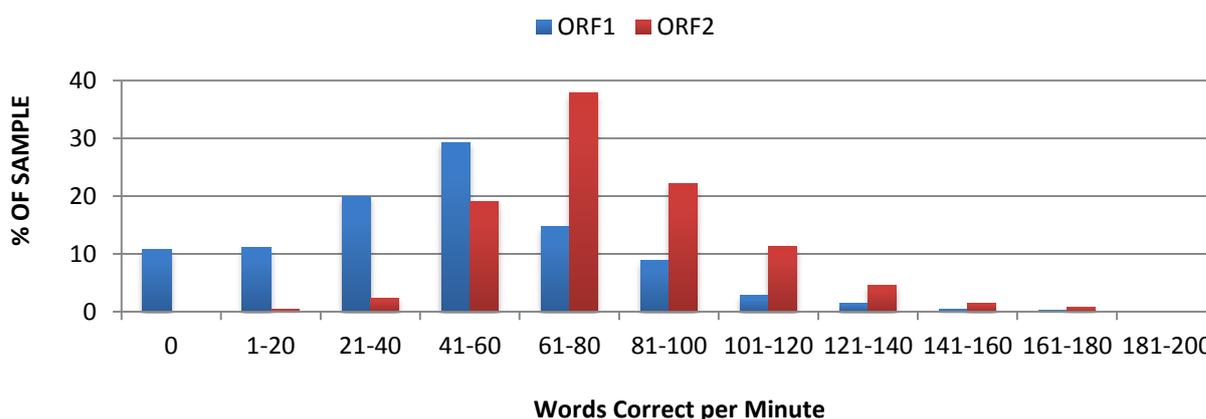


Figure 1: Frequency distribution of ORF1 and ORF2 scores

More than 10% of the sample could not read at all. When spoken to in English, these learners did not understand what the evaluator was asking them to do. A further 11.06% of learners could read only a few words, at a very slow pace of 20 WCPM or less. Such learners are generally considered illiterate, suggesting that nearly 22% of Grade 5 learners tested are illiterate. This figure is even more alarming

given that English is the LOLT for these learners and that they are expected to access their subject content through the use of English textbooks.

The encouraging feature of Figure 1 is that the average ORF2 score of the 49% of learners who qualified to do the second, more difficult, passage are reading close to the norm for this age. In other words, around half of children tested in these rural schools are reading close to the appropriate level of fluency. Unfortunately, they comprehend little more than their peers who are reading less fluently.

5.4. WRITING

The power of writing comes from its ability to leave a permanent trace. This allows the writer to reflect upon what has been written, generating and refining ideas in the process. Writing is the technology that frees ideas and information from space and time attachments, giving them the capacity to reach a wide audience across continents and generations. Even more important for the development of individual learners, the research literature has firmly established the centrality of writing in shaping the way we think, reason, and learn. For this reason an important aspect of NEEDU's evaluation methodology was to examine learners' books in order to assess the quantity and quality of writing undertaken in class and at home.

In order to determine the volume and frequency of writing undertaken, a norm was constructed, based on the assumption that learners in the IP should write at least one page a day on four days out of five. The number of pages of writing in learner exercise books in both language (LOLT) and mathematics was counted, and the percentage of the norm achieved was calculated. The results are shown in Table 3.

Table 3: Average pages of writing in learner exercise books

Class Arrangement	Grade	English FAL Percentage of norm	Mathematics Percentage of norm
MONOGRADE	4	38.48	68.07
	5	44.30	77.20
	6	54.19	82.62
MULTIGRADE	4	31.75	53.27
	5	37.13	64.55
	6	38.88	63.66

Table 3 shows that learners in monograde schools write considerably more frequently in both English and mathematics than do their multigrade peers, and that learners in both kinds of schools write significantly more in mathematics than they do in English. These differences notwithstanding, learners in both kinds of schools and both subjects are writing far less than what is expected of them, in terms of volume, if they are to become fluent writers.

Research studies have found that the degree to which information is reformulated or manipulated through writing has an impact on how well the information is integrated, learned, and retained. This finding indicates that extended writing (of paragraph length or longer) is more effective than shorter forms of writing (words or sentences) in developing the higher cognitive functions of synthesis, interpretation and analysis. Therefore, to assess writing quality, the numbers of paragraph length passages seen in language books were counted. In the large majority of schools visited learners wrote short passages (50-100 words) fewer than once a term.

A closer analysis of the English FAL exercise books in a subsample of 20 schools concluded that considerably less grammar is being taught than is required by CAPS, but that grammar tasks dominated the learner work submitted. Perhaps surprisingly in schools where reading comprehension is known to be poor, the microanalysis reported that some 79.6% of comprehension exercises specified by CAPS were in fact completed. However, the content of comprehension exercises did not relate to the other language work being done in the same time frame. Clearly, the text-based nature of the CAPS curriculum, which serves as an integrating principle across all language areas, was not being followed by most teachers. Overall, only 23.7% of the set of writing activities prescribed by CAPS was completed in the subsample.

Teachers seem to doubt that their learners are capable of putting their own thoughts and experiences down in writing. It is recommended that guidelines be developed mandating the average number of written pages in learner books over a given period. These guidelines could be developed by school-based curriculum managers who should also be involved in monitoring learner exercise books.

In a detailed analysis of a subsample of 36 mathematics exercise books no evidence of learner writing in the areas of measurement and transformation (transformations, area, perimeter and volume) was found and only seven schools included symmetry in the exercise books. There was also a marked lack of extension in the level of difficulty of the work being done by the learners. Many areas of work completed, as well as corrections of work done by the learners, were not marked at all or were merely ticked and signed as having been seen by the teacher, with no comment on the standard of the learners' work being made. Furthermore, there was little indication of either the HOD, principal or an official from the PDE regularly moderating the learners' books and indicating that the work being taught in the classroom was of a satisfactory standard.

An analysis of the DBE workbooks in English FAL and mathematics was undertaken on one book requested from the best learner in one class in each of Grades 4-6. This analysis involved counting the number of pages on which work could be seen to have been done, and calculating the number of pages completed per school day. Across the whole NEEDU sample, an average of less than one page on every day of teaching had been completed. In this regard, there is little to distinguish multi- and monograde schools. It was again striking to see how much more writing is done in mathematics than in language.

A detailed analysis in a subsample of 20 DBE mathematics workbooks was undertaken to gain insight into how learners approach the addition of two four-digit numbers. The analysis concluded that learners' performance indicated that they generally did not have any coherent conceptual understanding of the algorithms required to perform such calculations. The report identifies the approach advocated by CAPS, of presenting learners with multiple versions of algorithms, as part of the problem: exposing learners to too many methods may lead to confusion.

6. CONCLUSION AND RECOMMENDATIONS

In the five years since it was elected into office in 2009, the administration in place in 2013 has begun to build an accountability system aimed at achieving Outcome 1 of Cabinet's 12 priorities: improving the quality of basic education. Significant progress has been made, particularly at high school level, where not only the number of matriculants has increased, but the number qualifying to enter Bachelor level study has also grown and, perhaps most importantly, the throughput rate, while still low, is improving.

Progress at primary school level has been slower, and the targets set for 2014 are unlikely to be met in mathematics, while there is no clear sign of improvement in language either. Gaining traction in classrooms in some 26 000 schools with respect to national targets is obviously a long and slow process. NEEDU evaluations during 2013 indicate that improving learning outcomes in South African primary schools is subject to three principal threats. The main factor undermining the improvement of learning outcomes is one of capacity. It is worth repeating that the degree of success in building the capable state envisaged by the National Development Plan will be directly proportional to the capabilities of the servants of the state. For example, while teachers and their instructional leaders all the way up the line talk about using the ANA scores to improve instruction, the ability to do this is sorely lacking.

A second major threat to government achieving its aims with respect to basic education is predatory behaviour on the part of private interest groups, which undermine due process through one or other combination of organisational muscle, intimidation and bribery. Often accompanying predatory behaviour is organisational instability, the third threat to institutional efficiency. This may occur in the form of frequent changes to policy or high staff turnover. Every job in the school system requires application of specialised knowledge and proficiency in exercising standard protocols of practice. Gaining mastery of any position requires a great deal of learning on the job, and it can take anything up to two or three years for the head of a PDE, for example, to understand the technical intricacies and political challenges of the post provisioning process.

Similarly, stability is required in the policy domain. Rolling out the CAPS curriculum across the system, for example, has taken the best part of five years, and at least another five years will be required to bed it down and fulfil the textbook demands imposed by any new curriculum. In the last 20 years three major changes to the school curriculum have occurred and the system has been in a state of policy adjustment for this entire period. Whatever the imperfections of the curriculum may be, a period of stability is required to settle the system down to steady-state implementation. For the same reason, it is important that the *Action Plan* continues to frame instructional leadership activities throughout the system.

The ideas outlined above are not new and reflect debates currently in progress at all levels of schooling. The recommendations that follow are therefore intended to strengthen trends already in motion and to anticipate threats to their implementation.

6.1. POST PROVISIONING

The examples provided by Limpopo and the Eastern Cape show just how wrong the macro-planning process can go under conditions of political contestation and administrative incapacity. The long-term destructive effects of a malfunctioning post provisioning process motivate strongly for adherence to the national norms set in 1998 to regulate the process, which are currently maintained more in the breach than in the observance. A large part of the problem is undue influence on the process by organised interest groups. In the first instance the process must be removed from such influence. Consultation with interested and affected parties is an important principle of democracy that must be maintained, but capture of the decision-making process by one or other party inevitably compromises the quality of schooling.

RECOMMENDATION 1: POST-PROVISIONING NORMS AND STANDARDS

1A – The MBE should ensure that the following post-provisioning norms are articulated unambiguously in the relevant policy statements:

- Personnel to non-personnel ratio of 80:20
- Educator to support staff ratio of 85:15
- Procedures for constructing an affordable post establishment for each province, beginning with the available budget
- Protocols for rationalising schools.

These norms should be achieved by all provinces within five years.

RECOMMENDATION 2: EDUCATION MANAGEMENT INFORMATION SYSTEM

Without accurate and timeous data, efficient management of schooling is impossible and improving the quality of the Education Management Information System (EMIS) must constitute an urgent priority.

2A – The MBE should establish policy for the collection, analysis, communication and storage of information. This will include:

- Norms and standards for the provision of hardware, software, programmes and competent IT personnel in the DBE and every school, district and provincial office.
- The development of a programme that provides an integrated and comprehensive set of business practices to plan and monitor the acquisition and deployment of teachers, books and stationery, school maintenance, school planning, assessment, monitoring and teacher professional development.
- Training in the use of the business systems for personnel at school, district, province and national levels. Training programmes could be offered free of charge over the internet for prospective EMIS

practitioners. This would facilitate recruitment, attracting motivated and IT-smart technicians who have mastered the course on their own initiative.

2B – Provincial MECs, HODs and district managers should ensure that the human resources, hardware and systems for data management are installed in schools, linked to district and provincial offices, and adequately maintained, and that members of staff are trained to supply the data.

2C – School principals should ensure that data management protocols are followed in their schools. SMT members need to be trained in managing these procedures and competence in data management must be a criterion for appointing school leaders.

RECOMMENDATION 3: APPLYING POST-PROVISIONING NORMS AND STANDARDS

3A – The MBE, Provincial MECs and HODs should set target dates for achieving the norms and standards with respect to post provisioning and information management, and report annual progress towards achieving these goals. Early warning systems should trigger appropriate action by the DBE to assist provinces where necessary. Appropriate national capacity should be retained for this purpose.

3B – District managers, CMs and principals in districts and schools containing teachers in addition to requirements should be trained in the application of Collective Agreement No 2 of 2003.

6.2. TIME MANAGEMENT

RECOMMENDATION 4: OPTIMISING LEARNING TIME

4A – CMs and principals. Institutional functionality is the responsibility in the first instance of school principals, and ultimately of CMs. These officials should be held accountable by their respective superiors for optimising learning time, according to procedures laid down in the South African Schools Act. This includes the management of teacher leave. CMs should monitor time management practices in schools through unannounced visits. Where there are problems, CMs must work with principals to exert firm leadership and sound timekeeping practices throughout the school. This may require on-site mentoring and, in extreme cases, transfer of an underperforming principal.

6.3. READING AND WRITING

RECOMMENDATION 5: IDENTIFYING AND ROLLING OUT A PRIMARY READING AND WRITING PROGRAMME

5A – The MBE and Director General (DG). The MBE should lead the search for a programme for assisting teachers to teach literacy effectively. The DBE should fast-track plans to establish a Directorate of Primary Literacy with the specific tasks of coordinating the research and development of a literacy programme and directing its take-up and implementation by provinces. A fund should be allocated for investigating, developing and driving an effective reading and writing programme, and the accompanying reading materials, for the country.

5B – Provincial MECs and HODs. At the same time, provinces should continue to test existing initiatives and experiment with models used elsewhere. These programmes must be rigorously evaluated so that the lessons are clearly spelt out. The country – both public and private sectors – cannot continue to support programmes that show no effects.

5C – SAs, school principals, HODs and teachers. Schools should focus more attention on reading than they have been doing. This involves learners undertaking independent reading and writing activities every day. This should not be confined to language classes, but should occur across the curriculum. In addition to a reading programme supported by appropriate materials, as described above, teachers would do well to take their learners systematically through the DBE workbooks, covering the required quantum of work daily.

5D – Teachers, school HODs and district SAs. Teachers and school-level HODs in the FP and IP should monitor learner reading and writing systematically. Learners throughout the school should be assessed regularly, and the progress of weaker readers should be tracked at least quarterly. HODs may do this by getting each learner to read a grade-appropriate story from an unfamiliar book, and to count how many words are read per minute. Comprehension should also be tested, and this aspect must constitute a component of every written test.

Writing should also be monitored, following CAPS requirements, as set out in Table 4 and Table 5, and given in more detail in the DBE's *Reading Programme*.

Table 4: Norms for language writing quantity in the Intermediate Phase

TYPE OF WRITING	GRADE 4	GRADE 5	GRADE 6
Exercises containing examples of writing (dictation, single sentences, paragraphs, stories)	4 times per week	4 times per week	4 times per week

Table 5: Norms for writing quality in the Intermediate Phase

TYPE OF WRITING	GRADE 4	GRADE 5	GRADE 6
Exercises containing written creative and informational text, e.g. recounts, stories, reports	At least 50 words 1 to 2 paragraphs	At least 100 words 2-4 paragraphs	At least 150 words 3-5 paragraphs
Norm	1 per week	1-2 per week	2 per week

6.4. NUMERACY AND MATHEMATICS

The ANA scores detail the dismal performance across the country in mathematics. There is a tendency to view the Grade 3 and 6 results as disturbing, but only mildly so compared to the Grade 9 scores. This is a complacent view: the very poor Grade 9 scores should set alarm bells ringing concerning the teaching of mathematics throughout the primary school. The microanalysis of learner writing in mathematics undertaken by NEEDU indicates that, even where learners 'get the right answer' they do not necessarily understand how they got there. This lack of conceptual understanding catches up with them in Grade 9.

RECOMMENDATION 6: IDENTIFYING AND ROLLING OUT A PRIMARY NUMERACY AND MATHEMATICS PROGRAMME

6A – The MBE and DG. The MBE should lead the search for a programme to assist teachers to teach numeracy and mathematics effectively. The DBE should establish a Directorate of Primary Numeracy and Mathematics with the specific tasks of coordinating the research and development of suitable programmes and directing their take-up and implementation by provinces. A fund should be allocated to investigating, developing and driving an effective basic mathematics programme for the country.

6B – Provincial MECs and HODs. At the same time, provinces should continue to test existing initiatives and utilise models used elsewhere. Programme evaluation is key to understanding the impact and cost-effectiveness of interventions aimed at improving the quality of teaching and learning in mathematics.

6C – SAs, school principals, HODs and teachers. Learners should undertake curriculum-appropriate mathematics activities every day, under teacher guidance. It is important to provide mathematics textbooks to all learners in the primary school. In addition to using these systematically, teachers should take their learners through the DBE workbooks methodically, covering the recommended quantum of work daily.

6D – School HODs and district SAs. School-level HODs for the FP and IP should monitor learner progress in mathematics systematically, using criteria derived from CAPS.

6.5. ASSESSMENT

RECOMMENDATION 7: ANALYSIS AND USE OF ASSESSMENT DATA

7A – MBE and DBE. Systemic progress should be monitored by means of the verification ANA, and the universal ANA should be used only for diagnostic purposes. It is important for maintaining credibility that the verification ANA be commissioned to an outside agency in its entirety, and that the most rigorous psychometric principles be applied in ensuring comparability from one year to the next.

7B – SAs and school HODs. The province, district and circuit should work with HODs to increase the capacity of schools to undertake sensible item analyses of assessment exercises. SMT members should be directed and trained to moderate test and examination papers to ensure they are at the right standard specified by the curriculum. All test results should be used *at the school level* to identify teachers and learners who are having problems with particular topics, and to identify topics commonly found to be difficult. It is important to look at the results for each question in the test, in order to understand how effectively teachers and learners are progressing on the topic in question.

6.6. LEADERSHIP AND INSTITUTIONAL CONTINUITY

A prerequisite for the system to improve performance through substantive instructional leadership practices is for educators in promotion posts to be more knowledgeable and pedagogically skilful than the teachers they purport to mentor. Furthermore, promoting people who clearly do not exhibit superior talent undermines confidence in the integrity of the system and weakens respect for authority and discipline.

RECOMMENDATION 8: LEADERSHIP

8A – Developing systems for selecting leadership. The DBE and the Western Cape Department of Education should continue to develop and pilot competence tests for selecting SAs, principals and school-level HODs. Suitable regulations should be promulgated by the MBE, mandating their application once appropriate instruments have been proven to be effective. A starting point in assessing the curriculum knowledge of prospective HODs, for example, might be to require them to construct rubrics such as those shown in Table 5. A good understanding of their subjects and phases would be a prerequisite for all HODs. The DBE should continue to develop and pilot the subject knowledge and curriculum competence tests currently under construction. These knowledge-focused indicators are more valid measures of educator capacity than many of the process indicators that currently dominate the IQMS instrument. It is recommended that the negotiations currently under way to reform the system should take account of these considerations.

8B – Recruitment and promotion. Institutional leaders at national, provincial, district and school levels should use demonstrated expertise in the requirements of any job as the principal criterion for appointing and promoting staff.

6.7. PROFESSIONAL DEVELOPMENT

RECOMMENDATION 9: PROFESSIONAL EDUCATOR DEVELOPMENT

9A – In-school professional development. School SMT members should structure and lead systematic learning opportunities for teachers, through regular discussions on matters of curriculum, pedagogy and assessment. Throughout the primary school these should be focused on the development of reading, discussion of difficult topic areas and the exploration of different pedagogical techniques for particular topics, especially the teaching of reading, number concepts and the four arithmetic operations. This work should be based on continued analysis of learner responses to structured assessment activities.

9B – INSET and development. While short courses are necessary to introduce new curricula, INSET

has been singularly unsuccessful in changing classroom practices. All agents offering training and development should be required to adopt an impact-focused approach and be able to show the efficacy of their programmes. The current emphasis on reporting numbers in attendance and money spent should shift towards reporting on content coverage and skills gained by teachers. SAs should prioritise working with school-level HODs, building their capacity to undertake in-school professional development.

9C – ITE. In the school sector the chain of human resource development starts with the education of teachers. One possible reason for the ineffectiveness of INSET is that the gaps in teacher knowledge are too large to be bridged to any degree by short courses. From this perspective, ultimate accountability for the quality of schooling rests with the ITE sector.

Teacher educators need to ensure that newly qualified teachers and educators completing post-graduate courses have the knowledge and skills required to reach very much higher levels of reading, writing, mathematics and institutional leadership than is currently the case with the majority of teachers in the system. The promotion of a national debate on what this entails for curricula is a matter of urgency; it should be led by the Educator Deans Forum and involve the DHET, DBE, CHE and SACE. Current efforts led by the DHET to research and seek consensus on effective means of initial and continuing teacher development should be intensified and placed within a long-term plan for the reform of teacher education. The CHE should institutionalise a system of periodic quality audits of all ITE and formal INSET programmes.

6.8. ACCOUNTABILITY AND THE MINISTRY OF BASIC EDUCATION

Much has been achieved in education over the last five years: an overall plan for raising school quality has been linked to national priorities, targets have been set, resources distributed, metrics constructed, measurements taken and analytics produced. If a priority is to be set for the new administration elected into office in May 2014, it should be to complete the circle of accountability. The final link in the chain is to spell out and bring to bear the consequences of non-compliance. The trouble with policy that has no consequences is that it remains inert, as is the case with the 1998 *Norms and Standards for School Funding*.

However, in the context of concurrent powers and a division of authority between the national and provincial levels of government with respect to schooling, gaining compliance from provinces in respect of national policy is not easy. Matters are further complicated under conditions of political contestation within provinces. In such cases, it is too easy for a well-connected interested party to play one arm of government off against another, to its own advantage. Another key issue on which better coordination of purpose and resources between the various arms of government should be a priority is the question of salaries. These are set at the level of the public service through a process over which the DBE and PDEs have little influence, yet these departments have to bear the financial consequences. Since the institution of the OSD in 2007, the annual rise in personnel costs well in excess of inflation has led to spiralling salary costs and placed an inexorable squeeze on non-personnel expenditure in all provinces. The long delayed review of educator pay announced by the President in 2013² should pay close attention to this issue.

The most common way for a national body to move elements of a federal structure towards compliance is through a system of incentives and sanctions, which means tying it to budgets in some way. What is 'holding accountable' if not spelling out the consequences of failure to comply or poor compliance? This is a question for the larger polity. In the first instance, central government should act in concert and use all the political and legal influence at its disposal to gain consensus from the provinces, not only on the content of policy but also on the details of its implementation and the consequences of non-compliance. In the final analysis, the provisions of section 8 of the National Education Policy Act, which empower the Minister to demand compliance, under the supervision of Parliament, should be applied to provinces that fail to follow the national consensus.

² Announced by President Zuma, 8 August 2013. See *Justice Ngcobo to head Presidential Remuneration Commission*, downloaded from <http://www.sanews.gov.za/south-africa/justice-ngcobo-head-presidential-remuneration-commission> on 5 May 2014. See also *Teachers' pay review underway again, 20 June 2013*, downloaded from <http://www.iol.co.za/news/politics/teachers-pay-review-under-way-again-1.1534917#.U2dFd2YaLmQb> on 5 May 2014.

FURTHER INFORMATION CAN BE OBTAINED FROM:

The National Education Evaluation and Development Unit

222 Struben Street
Pretoria

Tel: (012) 357-4130/4131
Fax: (012) 323-9186

e-mail: vanstaden.a@dbe.gov.za

www.education.gov.za/NEEDU/tabid/860/Default.aspx

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222 Struben Street, Pretoria

Tel: (012) 357-4130/4131 | Fax: (012) 323-9186 | e-mail: vanstaden.a@dbe.gov.za
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