Report on the Implementation Evaluation of the National Curriculum Statement Grade R to 12 Focusing on the Curriculum and Assessment Policy Statements (CAPS)

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It should be noted that any opinions expressed in this report are the responsibility of the service provider and not of the Evaluation Steering Committee, DPME, or Department of Basic Education.

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GLOSSARY

ACE	Advanced Certificate in Education
ACER	Australian Council for Educational Research
AERA	American Educational Research Association
ANA	Annual National Assessments
AP	Action Plan
ATP	Annual Teaching Plan
BEd	Bachelor of Education
C2005	Curriculum 2005
CAPS	Curriculum Assessment Policy Statements
CES	Chief Education Specialist
CIPELT	Certificate in Primary English Language Teaching
CISELT	Certificate in Secondary English Language Teaching
CKT	content knowledge for teaching
CKT-M	content knowledge for teaching Mathematics
CM	Circuit Manager
CNE	Christian National Education
CPD	continuing professional development
CSI	corporate social investment
CTAs	Common Tasks of Assessment
DAR	Drop All and Read
DBE	Department of Basic Education
DCES	deputy chief education specialist
DHET	Department of Higher Education and Training
DPME	Department of Planning, Monitoring and Evaluation
EDF	Education Deans Forum
EFAL	English First Additional Language
EGRA	Early Grade Reading Assessment
EHL	English Home Language
ELRC	Education Labour Relations Council
ETDP SETA	Education, Training and Development Practices Sector Education and Training Authority
FAL	First Additional Language
FET	Further Education and Training
FP	Foundation Phase
GET	General Education and Training
HEDCOM	Heads of Education Departments Committee
HEQC	Higher Education Quality Council
HL	Home Language
HODS	heads of departments
HR	Human Resources
IIAL	Incremental Implementation of African Languages
INSET	in-service education and training
IP	Intermediate Phase
IQMS	Integrated Quality Management System
ISPFTESA	Integrated Strategic Planning Framework for Teacher Education and Development
ITE	initial teacher education
ITERP	Initial Teacher Education Research Project
JET	JET Education Services
JICA	Japan International Cooperation Agency
KSV	knowledge, skills and values
LA	learning area
LAC	Language Across the Curriculum

LitNum	Literacy and Numeracy
LOLT	language of learning and teaching
LTSM	learning and teaching support materials
MEd	Master of Education;
MOVs	methods of verification
MRTEQ	Minimum Requirements for Teacher Education Qualifications
MST	Mathematics, Science and technology
NCLB	No Child Left Behind
NCS	National Curriculum Statement
NDP	National Development Plan
NEEDU	National Education Evaluation and Development Unit
NGO	non-governmental organisation
NPC	National Planning Commission
NSC	National Senior Certificate
OVIs	objectively verifiable indicators
PCK	pedagogical content knowledge
PEDs	Provincial Departments of Education
PGCE	Post-graduate Certificate in Education
PIRLS	Progress in Reading Literacy Study
PLCs	professional learning communities
PrimTEd	Primary Teacher Education Project
R&D	Research and Development
SA	subject advisor
SACE	South African Council for Educators
SACMEQ	Southern and Eastern African Consortium for Monitoring Educational Quality
SADTU	South African Democratic Teachers Union
SAQA	South African Qualifications Authority
SBA	school-based assessment
SES	senior education specialist
SGBs	School Governing Bodies
SLA	service level agreement
SMT	School Management Team
SP	Senior Phase
SPADE	Schools Performing Above Demographic Expectations Project
TIMSS	Trends in International Maths and Science Study
TOC	theory of change
VAMs	value-add measures
WCSE	Western Cape Systemic Evaluation

EXECUTIVE SUMMARY

1 CONTEXT

1.1 Introduction

In July 2009, the Minister of Basic Education appointed a Task Team to investigate the nature of the challenges experienced in the implementation of the school curriculum and to formulate a set of recommendations designed to improve implementation. The Task Team presented a set of recommendations for improving the design and implementation of the school curriculum. One of the outcomes was a re-packaged curriculum policy, the National Curriculum Statement Grades R-12 (NCS).

1.2 Background to the intervention

The Department of Basic Education (DBE) took the recommendations of the Ministerial Task Team as a mandate for revision not only of the school curriculum, but also of the many support systems, including systemic testing, the provision of workbooks and teacher development. The first step in fulfilling this mandate was to develop a plan, the *Action Plan to 2014: Towards the Realisation of Schooling 2025*.

New policies were issued at the same time as the *Action Plan*, most important of which is the NCS. The NCS was phased in as follows: Foundation Phase (FP) and Grade 10 in 2012, Intermediate Phase (IP) and Grade 11 in 2013, and Senior Phase (SP) and Grade 12 in 2014.

The recommendations of the Ministerial Task Team encompass much more than a redesign of the documents specifying what learners are expected to value, know, and be able to do. They encompass the eight key aspects of schooling around which the literature review for the evaluation was structured. The evaluation investigated all these elements in order to understand the role of each in facilitating or hampering delivery.

1.3 Background to the evaluation

Following an open tender process, the DPME appointed JET Education Services to undertake an implementation evaluation of the NCS. A Service Level Agreement (SLA) was signed on 4 March 2016 and the commissioned evaluation was titled *Implementation Evaluation of the National Curriculum Statement Grade R to 12 Focusing on the Curriculum and Assessment Policy Statements (CAPS)*.

2 METHODOLOGY

The Service Level Agreement (SLA) governing the evaluation specified that the method followed should focus on 24 case studies, consisting of 12 primary schools and 12 secondary schools sampled from all Quintile 1-3 schools (the poorest) in four provinces: Eastern Cape (EC), Gauteng (GP), Kwa-Zulu Natal (KZN) and Mpumalanga (MP). The case studies, based on a matched-pairs design, with an outlier, were supplemented by engaging with curriculum officials at national, provincial, and district levels.

3 KEY FINDINGS FROM THE LITERATURE/DOCUMENT REVIEW

The Literature Review was structured according to seven themes:

3.1 Learner performance. The evidence is unequivocal that the South African school system is gaining ground in terms of improved scores and a narrowing equity gap. Yet, there is universal dissatisfaction with performance, particularly in schools serving the poor.

3.2 Curriculum design. An emerging consensus around curriculum design is that the design should be considered for minor revision, but that the overwhelming problem lies in implementation.

3.3 Learning and Teaching Support Materials. The research evidence indicates that the DBE workbook programme has proved successful in the production and delivery of books to schools and classrooms.

3.4 Summative and formative assessment. International research evidence indicates a major challenge to policy makers in finding a balance between the need for data on systemic progress and school accountability, with the need to grow the capacities of educators to use formative assessment to improve pedagogic quality.

3.5 Initial teacher education. Younger teachers are more knowledgeable than their older peers, but much more needs to be done in equipping new teachers for the classroom.

3.6 Continuous professional development. There is a growing concern that the considerable resources spent on continuous professional development (CPD) are not succeeding in raising educator capacity.

3.7 Instructional leadership. All signs point to weak leadership at school and district levels.

3.8 Pedagogy is a topic about which there is a great deal of research, but few conclusive insights, except that a majority of South African teachers exhibit a poor grasp of the subjects for which they are responsible.

4 KEY EVALUATION FINDINGS

4.1 Curriculum design. Respondents at national, provincial, and district levels, almost without exception, agreed that CAPS is superior to any of its predecessors in terms of the guidance offered to teachers. At the same time, there was wide agreement that implementation is inefficient. Suggestions were made for reviewing CAPS with a view to refining the existing documents with respect to the number of assessment tasks, the breadth of content in some subjects, and providing more guidance for teachers in the area of assessment.

4.2 Time-management. The evaluation found that the majority of primary schools visited plan their timetables according to CAPS requirements, but most high schools do not, a number of them significantly so. Having a timetable which meets CAPS specifications is one thing, but adhering to the timetable is quite a different matter. At school level, fieldworkers observed how many classes were without teachers during the first period on the second day of the field visit and the last period on the first day. Only six of the 24 schools had, at most, one teacher not in class during one or both observation periods; on average, 18% of teachers were not in class during each of these times. In addition, in all the schools visited, frequent disruptions to the timetable occur for a variety of reasons: training, union meetings, memorial services, choir competitions, and the like. Under these circumstances, no curriculum is implementable.

Interviews conducted at system level indicate that district, provincial, and national officials are aware of this problem and complain about it frequently. Yet many officials do not accept responsibility for school functionality, although, in terms of their job specifications, they have not only the authority, but indeed the obligation, to intervene in these institutions.

4.3 Teacher knowledge. Three tests were constructed to measure the content knowledge of Grade 2 teachers in Mathematics and English and Grade 10 teachers in Mathematics, Mathematical Literacy and English. The tests consisted of typical problems encountered in the Intermediate or Senior Phase curricula, respectively. Of the 22 Grade 2 teachers tested in Mathematics and English, only five achieved the modest benchmark of 60% in EFAL, and

three achieved it in Mathematics. The picture for Grade 10 teachers is very similar: six of the 12 English teachers reached 70% on the same EFAL test administered to Grade 2 teachers; four of the 12 Mathematics teachers scored 70% on the Grade 10 Mathematics test; and three of 12 Mathematical Literacy teachers reached 60% on the same Mathematics test.

These results suggest that between two-thirds and three-quarters of these Grade 2 teachers do not possess the subject knowledge required to teach English or Mathematics, while half the Grade 10 English teachers are not competent to teach English and two-thirds to three-quarters of Mathematics and Mathematical Literacy teachers have fundamental gaps in their knowledge repertoires. The small and unrepresentative nature of the sample precludes the findings from being at all representative of the South African teacher population. However, the test scores of teachers in the present study confirm the findings of other research studies of teacher content knowledge which have emerged in recent years.

4.4 Formative assessment. Section 4 of the CAPS documents for each subject in the respective phases is concerned with assessment, where formative assessment is seen as a key lever in the implementation of CAPS. The evidence is strong that the majority of school-level heads of department (HODs) are not exercising adequate instructional leadership regarding assessment in terms of checking teachers' assessment records, moderating test and exam papers, analysing test scores, and discussing the implications for pedagogy. Clearly, there is little coherence within most schools concerning the use of assessment to improve teaching and learning: while schools go through the motions of setting, administering, and marking tests and exams, their most important use is for promotion purposes, and their formative potential goes largely unrealised.

4.5 Support by subject advisors and school heads of department. There is wide agreement among curriculum officials at all three systemic levels that support for teachers is not optimally provided by districts and schools. Two issues were identified by respondents as problematic. First, there is a mismatch between expectations of how subject advisors and HODs should support teachers and the resources available for them to meet these expectations. It is generally expected that subject advisors should visit schools and support teachers directly in their classrooms, but this is quite unrealistic, given the large numbers of schools allocated to each subject advisor. Similarly, HODs generally have full teaching loads, with little time available for working with teachers. It can be argued that greatly increasing the number of subject advisors and HODs is not feasible, nor even desirable.

The alternative is to change the way these key instructional leaders work, so as to have maximum impact on the quality of classroom engagements. If we accept that in-school instructional leadership is an important element in any attempt to improve teacher competence and effectiveness on a system-wide basis, then HODs would be central to such an effort. It follows that subject advisors should focus their efforts on working with HODs to strengthen their capacity and build instructional leadership systems.

4.6 Promotion practices. Partly responsible for the weak instructional leadership exerted by HODs and subject advisors is the appointment of inappropriate candidates to these and other promotion posts. The view that nepotism, bribery, and the buying and selling of posts are rife in the awarding of promotion posts is widespread among system-level interviewees. These perceptions are associated with a widespread culture characterised by lack of respect of educators for their leaders and a feeling of helplessness. Curriculum delivery is a process which is highly dependent on the expertise and motivation of educators, whether situated at classroom, school, district, provincial, or national level. A system which does not carefully select and continuously educate this cadre of instructional leaders cannot optimise learning; a system which allows these processes to be abused on a wide scale is turning a blind eye to the destruction of its own best intentions.

4.7 Presence and use of Learning and Teaching Support Materials. Teachers and their HODs reported a dearth of learning and teaching support materials (LTSM) at schools throughout the sample. These reported shortages are puzzling in the light of large budget allocations for LTSM in the majority of provinces. Whatever the reasons for the reported shortage of books, the classroom observations show that in nearly two-fifths of the 96 classes observed, no LTSM of any kind were used. Something of an exception is provided by the DBE workbooks. All educators interviewed in all primary schools agreed that the books were available, and that generally there are sufficient numbers for each child to own one. Furthermore, they were the most widely used books in the 61 primary classrooms observed, where DBE workbooks were used in half the lessons.

4.8 Learner writing. At both primary and high school level, the high variation in quantity of writing produced by schools in the same district shows weak instructional leadership with respect to writing emanating from the district. Interestingly, in most schools, a relatively high correlation between the quantities of writing produced by learners of different teachers indicates a degree of leadership in this regard. The relative neglect of certain types of writing on important topics may also be related to teacher knowledge weaknesses. In this regard, the paucity in Mathematics exercise books of writing in Euclidean Geometry is noticeable, while the low quantity of extended writing in EFAL probably reflects weaknesses on the part of teachers.

4.9 Pedagogy. On the question of pedagogy, it is evident that teachers manage time and learner behaviour relatively efficiently in their classes. However, learners are not set sufficient quantities of individual tasks to engage them fully, while teacher explanations of concepts and procedures generally lack clarity and detail. Furthermore, while teachers ask a large number of questions and spread them around the class, they do not make the most of opportunities afforded by learners' questions and responses to correct misconceptions and build on existing knowledge: such techniques lie at the heart of formative assessment.

4.10 Continuing professional development. Despite the enthusiasm with which senior managers described various intervention programmes in Literacy and Mathematics, there was unanimity at national level that current approaches to educator development (CPD) are not working; one senior manager added that poor quality initial teacher education (ITE) was part of the problem. Similarly, for six of the 16 provincial level respondents, the CPD offered by provinces and districts is working only to a limited extent. The view that workshop training is ineffective is widespread among district level subject advisors and was expressed at least once in each of the four districts visited.

No in-school CPD was provided at all at half (12/24) of the sample schools, while in the remainder, the activities were generally confined to attending staff meetings, joint planning sessions, or end-of-year moderation. While these activities provide fertile opportunities for CPD, this potential is weakly exploited, at best.

6 CONCLUSIONS

The extent to which the goals of CAPS have or have not been achieved is examined through the lens of six evaluation criteria: effectiveness, appropriateness, equity, efficiency, impact, and sustainability.

6.1 Effectiveness The criterion of effectiveness assesses the extent to which an intervention achieves its intended objectives and outcomes and identifies key factors influencing the achievement or non-achievement of these. The short answer to the question *Is CAPS being effective?* is that it is too soon to say. It is likely that the interventions which have been rolled out since 2011 – including the workbooks, promulgation of CAPS, and an increased focus on continuous professional development – are reinforcing the performance improvements which

began showing in 2011. However, there is also widespread agreement that the system continues to underperform.

6.2 Appropriateness. The relevance of an intervention is a measure of the extent to which it is suited to the priorities of the target group. We prefer the term appropriateness, which is used in conjunction with relevance, but also addresses the tailoring of interventions to local needs, priorities and skills. Under present circumstances, it seems that CAPS is unlikely to achieve its ambitious goals in the near future. But in this respect, CAPS is no different from any other curriculum which is likely to suffer the same fate under current conditions of poor time management and weak educator knowledge.

6.3 Equity. Equity refers to fairness and justice. As an evaluation criterion, it is used to consider the extent to which the implementation of CAPS is fair and does not exacerbate existing inequalities. The South African school system is manifestly inequitable, with children from more affluent homes out-performing their rural and township counterparts by at least two years of schooling by the end of Grade 5. The conclusion of the implementation evaluation is that this is not the fault of the curriculum, but of systemic non-curriculum causes and, in particular, weak educator knowledge capacity, very weak time-management practices, and a less than excellent ITE system. At the same time, scores on the TIMSS tests indicate that there has been a small improvement in the equity gap since 2011.

6.4 Efficiency. Efficiency is a measure of the extent to which the ratio of inputs - such as funding and human resources - required to achieve the desired outputs and outcomes are economical and productive. The evaluation found the implementation of CAPS in the majority of schools in the sample is grossly inefficient, with part-days and whole days wasted on non-timetable activities. HODs claim to undertake many monitoring activities, but much of this activity is 'going through the motions', completing monitoring forms and other forms of 'evidence', while having little impact on teaching and learning. Similarly, subject advisors can spend a whole day travelling, paying superficial visits to at most two or three of the scores of schools in their charge.

6.5 Likely impact. Impact refers to the long-term effects produced by the intervention, whether directly or indirectly, intended or unintended. No curriculum is likely to have a significant impact on the inequity gap exhibited by the South African school system in the short term, and the gap is only likely to be narrowed significantly under sustained implementation.

6.6 Sustainability. Sustainability is concerned with the continuation of benefits from the intervention after major development assistance has ceased. The evaluation found that the curriculum has experienced a period of consolidation since 2009. However, in the area of human resource management, some provinces and even the national department have undergone frequent changes of leadership and extended periods of senior officials in acting positions, a situation not conducive to sustainable systems change, according to the criteria recommended by the NDP.

Blockages to curriculum implementation

The conclusions of the evaluation are that significant blockages to the implementation of the NCS occur at five key points in the curriculum cycle: the initial education of teachers (ITE), the appointment of inappropriate candidates to promotion posts, ineffective in-service training (CPD), the poor use of time in schools, and ineffective instructional leadership practices exercised by subject advisors and school leaders.

7 RECOMMENDATIONS

Five recommendations are aimed at unblocking the inhibitions to curriculum implementation identified by the evaluation.

R1 DBE, Department of Higher Education and Training (DHET), South African Council for Educators (SACE), and universities should devise curriculum and practice standards to guide the education and work of teachers.

R2 DBE must review and apply merit-based appointment and promotion policies and processes for educators.

R3 DBE must work with universities, NGOs, and corporate partners to conduct research on effective in-service education and training for educators.

R4 DBE, in collaboration with Provincial Departments of Education, must develop an effective programme to achieve school functionality.

R5 DBE and Provincial Departments of Education should develop an effective programme to support school leaders and teachers in curriculum implementation.

The recommendations cannot be seen in a purely technical sense. Their implementation must be located within and energised by a vision of school excellence, a culture of service, and a strong sense of individual and institutional agency propelled from the highest political levels. There is likely to be resistance, both political and administrative, to certain elements of the programme, and it will require clear and consistent political leadership over at least a decade, coupled with strong administrative protocols and practices, to follow the interventions through to achieving the capable state envisaged by the NDP (NPC, 2012).

Each recommendation is accompanied by a number of sub-recommendations aimed at operationalising the recommendation.

Recommendation	No	Sub-recommendation
R1 DBE, DHET, SACE and Universities should devise curriculum and practice standards to guide the education and work of teachers. **Motivation:** The work of learners in acquiring the KSV of the curriculum is directed and coordinated through the work of teachers, the competencies for which, in turn, must be inculcated and regulated with a view ultimately to facilitating learning in classrooms.	**R1.1**	**Implementation of Umalusi recommendations regarding CAPS** It is recommended that DBE urgently consider the recommendations made by Umalusi regarding the maths and English (HL and EFAL) FET curricula. Following an evaluation of CAPS in 2014 it was recommended that this process be completed within 2 years.
	R1.2	**Raise the standard of EFAL in all phases** Evidence indicates that raising the standard of EFAL - through the inclusion of higher cognitive functions in the NSC, other common assessment exercises, and LTSM in all four phases – would enable learners to strengthen performance across the curriculum. As such, this sub-recommendation should receive the highest priority.
	R1.3	**Review of CAPS assessment section** The current review by DBE of Section 4 (Assessment) in the CAPS documents is supported. It is recommended that the following be included in the terms of reference for the review: • the number of formal tasks required by phase, and • clarifying the current confusion among teachers, HODs and SAs around levels of difficulty. A good way of dealing with this problem is by providing teachers with

Recommendation	No	Sub-recommendation
		examples of items which exemplify different cognitive processes and levels of difficulty.
	R1.4	**Review of CAPS content** It is recommended that DBE commission a review of the CAPS documents with a view to reducing content where appropriate. The priority should be on depth of understanding of the most important strands of the respective school subjects. DBE has identified this as a priority, and it is recommended that a wide range of experts be invited to participate in the review. This exercise should not result in major curriculum change. One way of addressing content overload, if it is found, is to label certain topics in CAPS as 'optional', or 'for further study', etc.
	R1.5	**Distribution of NCS documents** School level audits of NCS documents among teachers should be undertaken every three years, and supplies to schools topped up.
	R1.6	**Review of national assessment for GET** Regarding the redesign of a national assessment instrument for the GET Phase, it is recommended that DBE, in partnership with the provinces and in discussion with psychometricians and other assessment experts, drawn from both the public and private sectors: • Give careful consideration to the dangers inherent in implementing a poorly designed *summative assessment system* focusing on accountability (such as NCLB), taking account of the research; undertake a cost/benefit analysis before embarking on such an exercise. • Undertake a cost/benefit analysis before embarking on a *systemic evaluation* exercise. Particular consideration should be given to the marginal benefits of such a programme, over and above what is currently learned from SACMEQ, TIMSS, and PIRLS. • Pay particular attention to improving *formative assessment* at school and classroom levels. This is a central element of effective pedagogy, and formative assessment holds the key to linking the work of teacher educators, system-level officials, school leaders, and teachers. More detail on how to operationalise this recommendation is given in Sub-recommendations R1.7, R2.1, 3.1, and 5.1 – 5.4.
	R1.7	**Teacher education and management** DHET should continue to lead the PrimTEd programme, with strong support from DBE, while SACE should continue to lead the initiative designed to develop professional practice standards for teachers. It is recommended that DHET, CHE, EDF, DBE and SACE communicate with respect to their work regarding curriculum content standards for ITE, professional practice standards for

Recommendation	No	Sub-recommendation
		teachers, standards for the accreditation of CPD programmes, and standards for the assessment of educators'.
R2 DBE, provinces and districts must review and apply merit-based policies and processes for the appointment and promotion of educators **Motivation:** The delivery of education is a complex and highly technical task requiring on the part of educators a sophisticated knowledge which combines disciplinary (e.g., maths, English) and pedagogic (how to convey the discipline) knowledges. A key tenet of the NDP vision is that the capable state which delivers high quality services to its citizens is driven by the most responsible and competent people, selected according to their capacity to undertake the designated job.	**R2.1**	**Development of a merit-based promotion system** It is recommended that DBE, in collaboration with provinces: • Gives priority to instituting a competence-based system for the appointment of principals within three years. The lessons learned in WC and GP should be built on. • Develops sets of standards for subject advisors and heads of department, linked to the Standards for Principalship. • Pilots a merit-based approach to the appointment of school-level HODs and subject advisors.
	R2.2	**Implementation - provinces** Provincial officials should give particular attention to developing protocols for implementing the merit-based approach, in discussion with DBE.
	R2.3	**Implementation – districts** Circuit managers and subject advisors should support principals and monitor implementation of the promotions policy at school level, through direct observation and intervention where necessary.
R3 DBE must work with universities, NGOs, and corporate partners to conduct and support research on effective in-service education and training for educators **Motivation:** The CPD system is 'flying blind': while large sums are spent annually by public, private and international sources, little is known about the effects this	**R3.1**	**Promote a research-focused approach to CPD** It is recommended that DBE and private sector donors allocate at least 5% of any training initiative to R&D. Areas requiring the most urgent attention are programmes which enable primary school teachers to teach literacy and basic maths, and to practice formative assessment in support of these disciplines.
	R3,2	**Knowledge management** DBE should establish a Directorate for Knowledge Management, in the Research Coordination, Monitoring and Evaluation Chief Directorate. The task of the Dir: KM will be to collate research information on CPD and cumulatively build a knowledge base concerning the design and implementation of successful CPD programmes.

Recommendation	No	Sub-recommendation
activity. DBE needs to take the lead in directing these efforts towards more efficient solutions, through the intelligent use of information.		
R4 DBE in collaboration with Provincial Departments of Education must develop an effective programme to achieve school functionality **Motivation:** Government, from the highest level, has been condemning the poor use of time in schools since 1998. Until there is a movement from rhetoric to action, schooling cannot undergo the accelerated rate of efficiency proposed by the NDP. While the ELRC provides an important space for cooperation, at the end of the day activity cannot be held up indefinitely by any one party, and government needs to exercise its authority to move forward.	**R4.1**	**Developing a plan** DBE should work with provincial officials to develop an effective programme to achieve school functionality. Adequate resources, including transport to schools for district officials, must be allocated to the programme.
	R4.2	**Implementation – provinces** Each province should develop an implementation plan for achieving school functionality, which should include unannounced visits to schools by circuit managers. The statutory procedures governing the relationship between leaders and their subordinates are clear and even-handed in recognising both the responsibilities of managers and the rights of individuals. But in the end policy must be followed, even if it requires taking disciplinary measures against repeat offenders.
	R4.3	**Implementation - districts** It is recommended that circuit managers monitor implementation of time-use policy at school level, through direct observation. Principals and circuit managers who cannot maintain effective time management practices in the institutions under their jurisdiction must be rendered assistance, while repeated inability must lead to redeployment or dismissal, as prescribed by the law.
	R4.4	**Implementation – schools** School principals must ensure adherence of teachers to CAPS timetable. Recalcitrant teachers must be disciplined.
R5 DBE and Provincial Departments of Education should develop an effective programme to support school leaders and teachers in curriculum implementation	**R5.1**	**Developing a plan** DBE should work with provinces to incorporate best evidence of effective CPD programmes into the planning and rollout of support activities, with particular attention to literacy, basic maths and the use of formative assessment to promote learning in these foundation disciplines.
	R5.2	**Implementation – provinces** Provincial level curriculum leaders should work with subject advisors on the design, implementation and evaluation of such activities.

Recommendation	No	Sub-recommendation
Motivation: Monitoring and supporting the work of teachers involves much more than checking teacher documents and training workshops: it should include directing the daily work of teachers through lesson study, peer observation, and the analysis of test scores.	**R5.3**	**Implementation - districts** Subject advisors should work with school-level HODs, meeting regularly at a rotating central venue, on running in-school PLCs to focus on matters of curriculum, assessment and pedagogy. Particular attention should be given to using assessment data to identify learner misconceptions and pedagogical effectiveness in literacy and basic maths.
	R5.4	**Implementation - schools** Principals should coordinate and direct the team of HODs within the school to promote engagement by teachers with curriculum issues. The promotion and quality assurance of PLCs in the relevant phase/subject areas should be central to the principal's role in exercising instructional leadership, as envisaged in the Standard for Principalship. It is recommended that HODs: • work with teachers in in-school PLCs to focus on formative assessment and effective pedagogy, in this way strengthening teachers' understanding of and skill in applying PCK in class, constructing test papers, and analysing the results. • Part of this exercise must be to shift the focus of monitoring from inputs to outcomes, for example, using the Early Grade Reading Assessment (EGRA, and the Early Grade Maths Assessment (EGMA) tools to test directly the literacy and numeracy skills of learners.

1 BACKGROUND

In July 2009, in response to wide-ranging comments from a variety of actors, the Minister of Basic Education appointed a Task Team to investigate the nature of the challenges experienced in the implementation of the National Curriculum Statement (NCS) and to formulate a set of recommendations designed to improve implementation of curriculum policy. The Task Team presented a five year plan to improve teaching and learning via a set of short-term interventions aimed at providing immediate relief and focus for teachers and medium- and longer-term recommendations with the vision of achieving real improvement in student learning.

Part of the recommendations was a re-packaged curriculum policy, the result of which is the National Curriculum Statement Grades R-12, which stipulates policy on curriculum and assessment for the school sector. The NCS was gazetted in 2011 and implementation phased in as follows: the NCS was introduced into the Foundation Phase (FP) and Grade 10 in 2012, the Intermediate Phase (IP) and Grade 11 in 2013 and the Senior Phase (SP) and Grade 12 in 2014.

Although the body of research on curriculum in South Africa has grown in the last five years, relatively little is known about the experiences of schools, and particularly of teachers, concerning the implementation of the curriculum. The present study is aimed at addressing this gap.

2 THE BRIEF

Following an open tender process, the Department of Planning, Monitoring and Evaluation (DPME) appointed JET Education Services to undertake an *Implementation Evaluation of the National Curriculum Statement Grade R to 12 Focusing on the Curriculum and Assessment Policy Statements (CAPS)* through a Service Level Agreement (SLA) signed on 4 March 2016. The purpose of the study is to evaluate whether the curriculum has been implemented (and to what extent it is being implemented) as specified in the *Curriculum and Assessment Policy Statement (CAPS)* and how implementation may be strengthened. The SLA set seven evaluation questions as the starting point for the evaluation:

1. To what extent has CAPS been implemented?
2. Do teachers understand CAPS and do they have the necessary capabilities and motivation to implement the NCS according to CAPS and associated policies?
3. Are the support systems to support CAPS implementation working?
4. Is the theory of change (TOC) working as expected? Based on how the TOC is working, are the planned outcomes of CAPS likely to be achieved?
5. Based on the likelihood of achieving the outcomes, is the conceptualisation of CAPS and the systems for implementing it relevant and appropriate for the context in which CAPS operates?
6. Are there any gaps and challenges in the CAPS design and content? If any, are they hampering implementation?
7. How should the CAPS design and the systems for implementing CAPS be strengthened?

The SLA specified the potential users of the evaluation report as follows:

Potential users	How will they use it?
Department of Planning, Monitoring and Evaluation	Identify improvements to CAPS which the DBE needs to take forward.
Department of Basic Education	Understand how CAPS is working, suggest improvements in the design of CAPS and the targeting of funding and identify where it is necessary to introduce reforms of the programme.
	Understand how to improve implementation of the CAPS, including budget allocations.
Department of Higher Education and Training	Design of education faculty policies, programmes and interventions, including initial teacher education programmes and policies.
Other organisations (including universities, South African Qualifications Authority (SAQA), teacher unions, UMALUSI, non-governmental organisation Non-governmental organisations (NGOs) and the Education, Training and Development Practices Sector Education and Training Authority (EDTP SETA), among others)	Design of education faculty policies, programmes and interventions, including initial teacher education programmes and policies.

This report is written with these audiences in view.

3 EVALUATION DESIGN

3.1 Theory of Change

Soon after her appointment as Minister of Basic Education in 2009, Minister Motshekga began to receive comments from a range of stakeholders on the implementation of the school curriculum (DBE, 2009). While there had been some positive support for the new curriculum, considerable criticism of various aspects of its implementation was also received, notably:

- Teacher overload;
- Teacher confusion and stress; and
- Widespread learner underperformance in international and local assessments.

The Minister appointed a Task Team directed towards streamlining the NCS and making it more workable. The Task Team made a number of recommendations in its Final Report published in October 2009 (**Table 1**).

Table 1: Recommendations of the Ministerial Task Team and subsequent actions

Recommendation	Action
Develop a five-year plan to provide a vision and 'bigger picture' in terms of what education and the curriculum set out to do and achieve, specifically with regard to the learners. Monitoring of implementation of the plan is key.	*Action plan to 2014: Towards the realisation* of *schooling 2025*. (DBE, 2011a)
Streamline and clarify policies in the face of a plethora of policies, guidelines and interpretations, including confusion over Curriculum 2005 (C2005). These must be available to all teachers.	CAPS: single, coherent documents per subject or learning area per phase from Grade R to Grade 12.
Clarify Subject Advisor (SA) roles nationally and specify the exact nature of in-classroom and school support they should provide to teachers. SA roles differ from province to province and district to district; and yet this role is the main intermediary between the curriculum policy and classroom interpretation. SAs are present in numbers insufficient to achieving their multiple tasks.	Policy sent for comment regarding allocation of SAs, their roles and functions and policy declared.
Reduce teachers' workload, particularly with regard to administrative requirements and planning, to allow more time for teaching. Requirements of teachers have become unnecessarily complicated and appear to make little contribution to improving teaching or learner attainment; on the contrary, the administrative burden around assessment and planning appears to impact negatively on teaching and contact time.	Anecdotal evidence indicates that this goal is not being achieved, with teachers complaining about curriculum crowding and onerous assessment policies.
Assessment has been a challenge for teachers ever since Curriculum 2005 (C2005) was introduced, with an unnecessarily complicated approach to assessment. Simplify and streamline assessment requirements and improve the quality and status of assessment by making the General Education and Training (GET) and Further Education and Training (FET) Phases consistent, conducting regular national systemic assessment at Grades 3 and 6 and replacing the Common Tasks of Assessment (CTAs) with annual national testing for all Grade 9 learners in Mathematics, Home Language (HL) and English. The analyses of these systemic and national tests should be used to diagnose what to prioritise and target for teacher and learner improvement.	Introduction of Annual National Assessments (ANAs) in 2011, now in all primary and SP grades up to Grade 9.
Transition and overload in the IP: Reduce the number of learning areas (LAs) to six subjects, including two languages.	LAs reduced to 6 subjects: Incorporated into CAPS, EFAL introduced in FP.

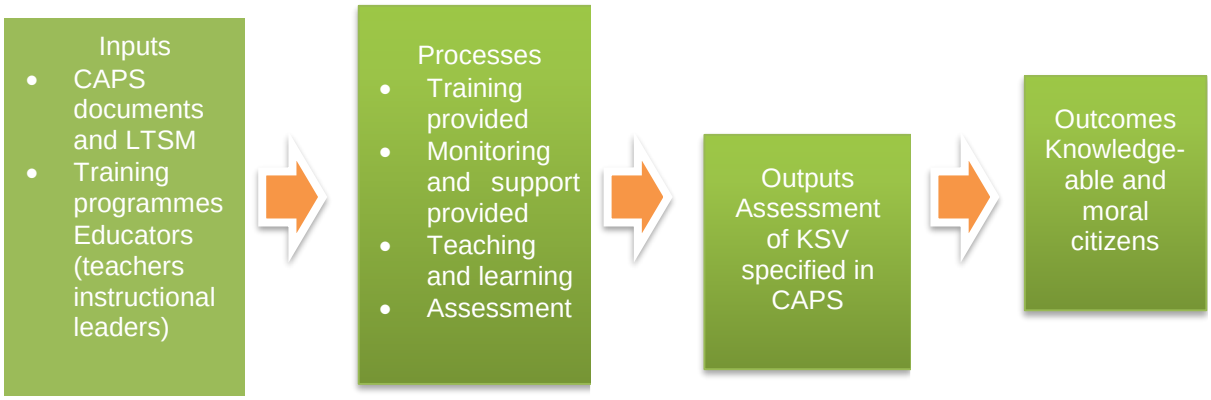
Recommendation	Action
The importance of learning English in the curriculum from Grade 1 underscored; recommended introduction of English as a First Additional Language (EFAL) in the FP.	
Learning and teaching support materials (LTSM and textbooks): The quality assurance and catalogue development for textbooks and other LTSM need to be centralised at the national level; the useful role and benefits of textbooks needs to be communicated at the highest level and each learner from Grade 4 to Grade 12 should have a textbook for each learning area or subject.	Centralisation of catalogue accomplished. Provinces generally make an effort to comply with the textbook requirements, although significant shortfalls in certain areas persist. Workbooks distributed annually to learners in Grades 1 to 9 in Mathematics and Languages.
Teacher training: Teacher hearings and submissions were unanimous in suggesting that current teacher development policies to support the curriculum were often too generic and superficial and did not provide the needed support to teachers. *Recommendation*: The training of teachers to support curriculum implementation should be subject specific and targeted only where needed; and all support staff, including school management, SAs and district officers, should also undergo training on the school curriculum.	Initial teacher education (ITE) expanded; introduction of Funza Lushaka bursary scheme. R1,1bn allocated to continuous professional development in 2014, with R435m spent.

Source: Constructed from DBE, 2009

The TOC adopted for the evaluation takes its starting point from the recommendations made by the Ministerial Task Team, which collectively provide the motivation for the broad structure of and supporting systems for CAPs. These recommendations encompass much more than a redesign of the documents specifying what learners are expected to value, know and be able to do. Taken together, they address every aspect of the curriculum, starting with the development of *'A coherent, clear, simple Five Year Plan to Improve Teaching and Learning across the schooling system…' (*DBE 2009: 62). The plan developed by the DBE, set out in the *Action plan to 2014: Towards the realisation of schooling 2025* (DBE 2011a) and updated in 2015 to *Action plan to 2019: Towards the realisation of schooling 2030* (DBE, 2015b). In direct response to this recommendation, the DBE's *Action Plan* includes the other recommendations of the Task Team concerning curriculum redesign, strengthening support structures to teachers, reducing their administrative load, assessment policy, supply of books, establishment of the Annual National Assessment (ANA) exercise and teacher training. The TOC puts these elements of schooling together in a set of logical relations.

The seven evaluation questions are at different levels of abstraction, the most abstract of which is *Q1: To what extent has CAPS been implemented?* This question, in turn, poses the practical question: How will we know when the new curriculum has been implemented? The answer, ultimately, is: When learners acquire the ultimate outcomes targeted by CAPS, that is: high level cognitive skills expertly practiced by responsible and moral citizens (DBE, 2011b). Achieving this outcome requires a complex interplay of sets of inputs, processes and outputs, as summarised in the following simplified Theory of Change.

Figure 1: Simplified Theory of Change



At its simplest, the answer to Q1 is about whether educators at various levels of the system, from the smallest classroom to the DBE, are following the specifications of CAPS. Understanding the mechanics of whether or not and why this is happening entails a detailed examination of the inputs, processes, outputs and expected short and medium term outcomes. This, in turn, requires that these components be unpacked in an elaborated TOC, summarised in Figure 2, which puts these elements of schooling together in a set of logical relations.

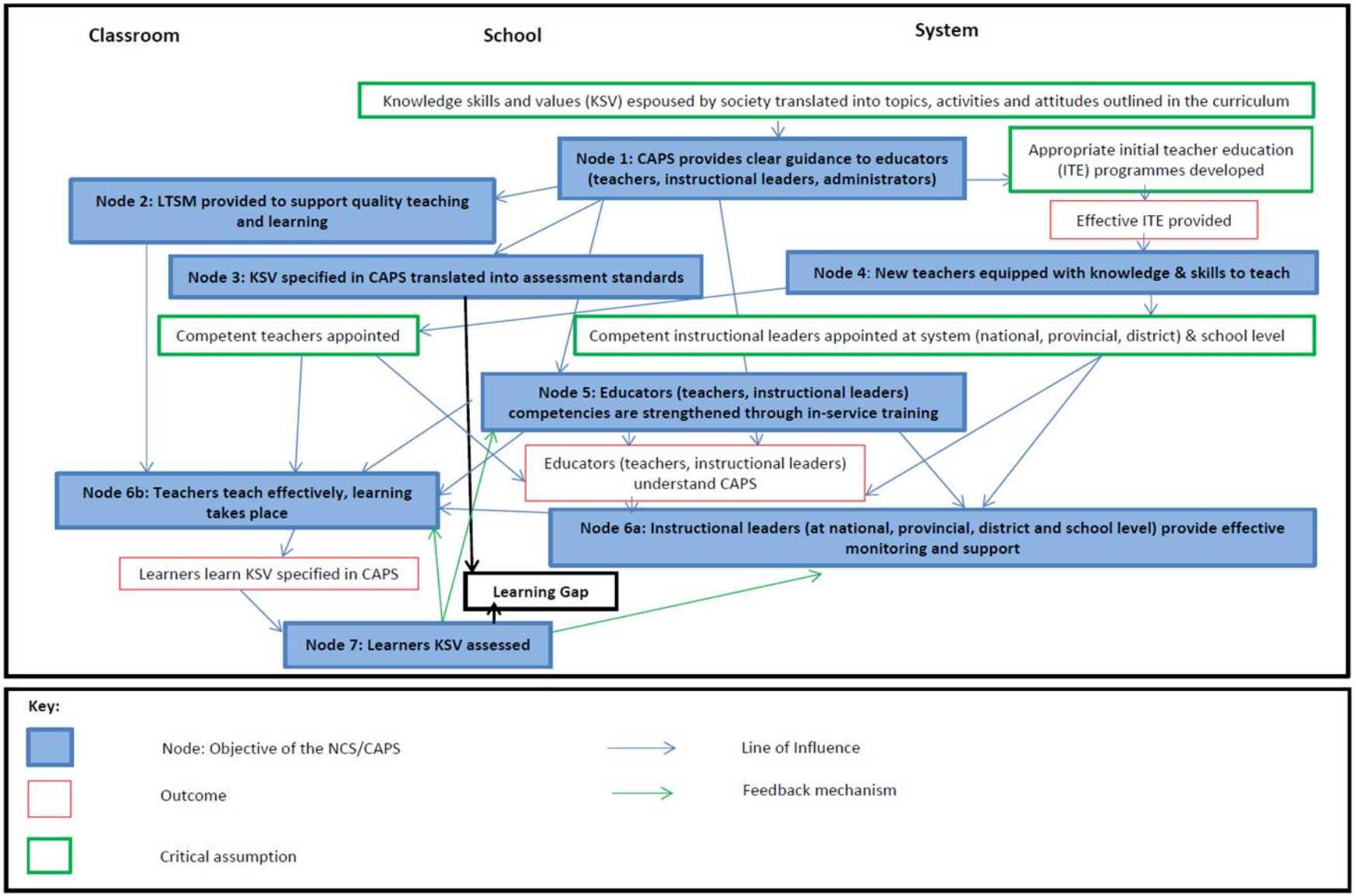
Essentially, the theory of change assumes that attention to the objectives detailed in nodes 1, 2, 4, 5 and 6 will narrow the learning gap between nodes 7 (assessment of learner performance) and 3 (expected standards of learner performance). But blockages can occur through malfunction in one or more of the 7 nodes of curriculum delivery. The implementation evaluation therefore examined each of the nodes shown in Figure 2, in order to understand its functionality, and establish factors that may be inhibiting or facilitating its optimisation.

The theory of change can be understood as follows:

The knowledge skills and values (KSV) which society espouses are translated into topics, activities and attitudes outlined in the curriculum. The curriculum (CAPS) is developed such that it provides clear guidance to educators on the KSV to be taught in South Africa schools (node 1). The curriculum (node 1) informs the development of learning and teaching support material (LTSM) (node 2). The KSV specified in the curriculum are translated into assessment standards (node 3). The curriculum (node 1) informs the development of appropriate initial teacher education (ITE) programmes (node 4), which are effectively implemented resulting in new teachers being equipped with the knowledge and skills required to teach the curriculum.

The curriculum (node 1) informs the development of appropriate in-service training programmes for instructional leaders and teachers (node 5). These programmes are also informed by the analysis of learner assessment data (node 7) and the learning gap. Provided that competent instructional leaders are appointed, who understand CAPS, appropriate in-service training is provided (node 5). These leaders will be able to support and monitor teaching (node 6a). The monitoring and support provided is also informed by the analysis of learner assessment data and the learning gap (node 7).

Figure 2: Theory of Change for the NCS and CAPS



Provided that competent teachers are appointed, who understand CAPS and LTSM is available to support teaching and learning (node 2), appropriate in-service training is provided (node 5) and effective monitoring and support is provided by instructional leaders (node 6a), teachers will teach effectively and learning will take place (node 6b). Teaching is also informed by the analysis of learner assessment data and the learning gap (node 7).

If teaching is effective (node 6b) and in line with CAPS, learners will learn the KSV specified in CAPS. This is ascertained through learner assessment (node 7). Learner assessment measures the difference between what learners know and can demonstrate and the standards which are expected (node 3). The difference between the measurement and what is expected in the learning gap, which informs the provision of in-service training (node 5), monitoring and support (node 6a) and teaching practice (node 6b).

The theory of change spans several levels, vis-à-vis: classroom, school, district, provincial and national (subsumed under the label "system"). The Figure 2 is, of necessity, at a relatively high level of abstraction and without substantive detail. In what follows, each node is expanded into a more detailed theory of change, a theme which is taken up again in the Literature Review below (section 3.9).

Node 1. The NCS sets out what is to be taught and learned by school subject and grade and how this content is to be assessed. It comprises three documents, The *National Curriculum and Assessment Policy Statement Grades R-12 (*CAPS), the *National Policy pertaining to Programme and Promotion Requirements (R-12)*, and the *National Protocol for Assessment Grades R-12*.

The brief governing the evaluation specifies that CAPS be the principal focus of the evaluation, looking specifically at the FP and Grade 10, given that these were the two levels at which implementation of CAPS commenced in 2012. Rather than undertake a relatively superficial study of all three grades in the FP, it was decided to look at one grade in more depth; Grade 2 was selected on the grounds that Grade 3 is commonly studied by research programmes, while children in Grade 1 write relatively less and there is therefore less evidence on which to judge the progress of curriculum implementation.

The detailed specifications of CAPS draw their direction from the seven Principles of the NCS (section 4.1.5 below): these are the KSV towards which South African society strives and wishes to inculcate in the nation's children.

Node 2 concerns LTSM: books, wall charts, manipulative materials and the like. It goes without saying that reading and writing cannot occur without books, while manipulatives (such as counters, geometric shapes and the like), charts and other aids assist the development of concepts. Furthermore, while CAPS describes what is to be learnt, printed books and other materials embody the KSV in activities, exercises and examples and thus are not only aids to learning, but indeed form an essential component of explicating the curriculum.

Node 3, together with Nodes 1 and 2, completes the process of curriculum specification by means of specific assessment tasks contained in tests, examinations, class quizzes and written assignments which set the standards – the learning goals or expected performance – of the curriculum. In addition, international comparative exercises such as the Southern and Eastern African Consortium for Monitoring Educational Quality (SACMEQ) and the Trends in International Maths and Science Study (TIMSS) are important for objectively tracking long-term trends in the school system.

Nodes 4 and 5 are about teacher education, both before entering service as a qualified teachers (initial teacher education, or ITE) and while on the job (continuing professional development, or CPD). The standard of teacher education is obviously of crucial importance to the quality of teaching. Evidence of the state of teachers' knowledge and skills was obtained

directly by testing teachers and talking to them about their CPD experiences and needs and indirectly through the research literature.

Node 6a is about curriculum management, or instructional leadership. Instructional leadership is exerted at all systemic levels – national, provincial, district and school – and is directed toward assisting teachers to implement the curriculum. It consists of a variety of monitoring and support systems, including policy and materials issued by the Ministry and the DBE, a host of activities undertaken by SAs at provincial and district levels, school policy and, most importantly, the work of school level heads of department (HODs), subject heads, deputy principals and principals. These leadership activities coordinate the practices of and provide for the needs of teachers. The quality of instructional leadership is a particular focus of the current evaluation.

Node 6b represents the daily interface between teaching and learning in classrooms. All other curriculum processes depicted in Figure 2 are ultimately directed towards supporting teachers and learners as they engage with the curriculum. Direct evidence on the quality of teaching and learning was obtained through classroom observations, while the analysis of learner books and teacher records provided indirect evidence of the kinds of pedagogical practices prevalent in the schools under study.

At **Node 7**, learner scores on the various assessment tasks described under Node 3 above provide learners, teachers and instructional leaders with valuable evidence on the results of the teaching and learning process. Data from Node 7 is therefore an indispensable pedagogical tool for teachers and a monitoring instrument for instructional leaders.

3.2 Logframe and Instrument Development

This is a qualitative evaluation driven by a set of six case studies in each of four provinces, made up of three primary and three high schools per province. The case studies were supplemented by means of analysis of the relevant curriculum policies and semi-structured interviews with national, provincial and district officials concerned with the design and implementation of the curriculum. The case studies were pursued through: interviews with the principal, HOD and teachers in the 24 schools; school- and classroom-level observations; document analysis; and the administration of subject content tests to a selection of teachers at Grade 2 and 10 levels in the primary and high schools, respectively. The construction of instruments to guide this work consisted of a number of stages.

First a logframe was constructed (given in full in Appendix A: Logframe). The starting point for the logframe was the seven nodes described in the TOC. The objectives of the evaluation for the logframe are defined as follows:

Objective 1: Curriculum documents produced and distributed to districts and schools, providing clear guidance on the KSV to be taught.

Objective 2: Appropriate LTSM provided to schools.

Objective 3: KSV described in CAPS are captured in ANA and NSC tests and examinations; this covers node 3 (the KSV translated into assessment items) of the TOC.

Objective 4: New teachers are competent to teach CAPS.

Objective 5: Provide training to educators in service on the use of CAPS.

Objective 6a: Support provided to teachers by school leaders and district subject advisors.

Objective 6b: Teachers teach effectively; the outcomes of effective teaching are learner scores (node 7 of the TOC).

The anticipated outcomes, outputs and activities associated with each objective, together with the objectively verifiable indicators (OVIs), methods of verification (MOVs) and underlying assumptions, were derived from the literature review and discussions with the Project Steering Committee. These provide the rationale behind and evidence for the significance of these factors for effective teaching and learning.

The next step in constructing instruments was to disaggregate the seven evaluation questions into a number of more pointed sub-questions. While the sub-questions shown in Appendix B are the same as in the list approved by the Project Steering Committee, the order has been changed so as to cluster sub-questions 1.1 – 1.16 according to themes: *Planning and pacing* (1.1-1.3, 1.5, 1.11), *Assessment* at school (1.4) and classroom (1.13, 1.15) levels, *Availability and use of LTSM* (1.6-1.7), *Time management* at school (1.8) and classroom (1.9) levels, *Pedagogy* (1.12, 1.14, 1.16) and *Infrastructure and non-curriculum resources* (1.10).

An evaluation matrix was then constructed, plotting the instruments on the horizontal axis against the sub-questions on the vertical axis, as shown in Appendix B, where the marked cells indicate which information was derived from the respective sources. There was an iterative process between refining the logframe and developing the data collection instruments for the evaluation. The instruments sought evidence to answer the evaluation questions and sub-questions and the logframe sought to define indicators for the different project components which were then incorporated into the data collection instruments.

In addition, the instruments drew on experience gained in previous projects of this type, including the National School Effectiveness Study (Taylor, van der Berg and Mabogoane, 2013) and the NEEDU evaluations of 2012 and 2013 (NEEDU, 2013; 2014). The instruments were developed in discussion with members of the Project Steering Committee and piloted in two primary schools and two high schools in one of the target provinces.

3.3 Sampling

The brief governing the present evaluation specified that the evaluation focus on the FP and Grade 10, given that these were the two levels at which implementation of CAPS commenced in 2012. Rather than undertake a relatively superficial study of all three grades in the FP, it was decided to look at one grade in more depth; Grade 2 was selected, on the grounds that Grade 3 is commonly studied by research programmes, while children write relatively less in Grade 1, providing less evidence on which to judge the progress of curriculum implementation. The original intention was to include some data on activities in Grades 1 and 2, together with an analysis of the extent to which Grade 3 learners are ready for the transition to English as the LOLT in Grade 4, but these intentions did not materialise, due to the large volume of data collected in Grade 2.

A matched pairs design was used to identify two primary schools and two high schools in each of the four provinces identified in the SLA for the evaluation: Gauteng, Mpumalanga, KwaZulu-Natal and the Eastern Cape. These provinces were selected in order to provide a cross section of schools, from the most highly urbanised to the most rural and isolated. The decision to focus on Quintile 1-3 schools was based on the fact that these serve the poorest learners and are also the largest component of the school system (over 60% of all schools).

Within each pair, schools were matched as closely as possible in terms of key variables such as school district, socio-economic status of learner community (it was also specified in the SLA that only Quintile 1-3 schools be sampled), geographical location, and governance and management. The key variable which distinguishes the two schools in each pair is learner performance, with one school showing above average performance and the other performing below average. The theory behind a matched pairs design is that since all the variables known to influence learner performance, except school leadership and pedagogy, are kept constant, differences in performance will largely be attributable to differences in instructional leadership

and teaching quality. This is a design which has found some favour internationally and in South Africa as a method for studying effective school- and classroom-level practices (see especially Hoadley and Galant, 2015b).

The sampling process was as follows:

Datasets for Sampling

Primary Schools in the four provinces, Quintiles 1-3

Secondary Schools in the four provinces, Quintiles 1-3

Performance Measure

Primary Schools: Grade 2 Mathematics Average, ANA 2014

Secondary Schools: NSC Pass Rate, NSC 2014

Performance Variable

For both primary and secondary schools, schools were grouped into five performance quintiles (not the national school quintiles, but quintiles according to performance in Grade 2 Mathematics for primary schools and the NSC pass rate for secondary schools). Further, those in Performance Quintiles 1 and 2 were classified as low-performing, while those in Performance Quintiles 4 and 5 were classified as high-performing. Those in Performance Quintile 3 were excluded. The cut-off points were dependent on the score distribution data. An attempt was made to select schools only in Quintiles 1 and 5 in order to maximise the differences within matched pairs, but too few schools met these criteria. Hence schools in Quintiles 2 and 4 were included in the low- and high-performing groups, respectively. Also, these performance measures were calculated per province and, as a result, a low-performing school in one province might be better than a high-performing school in another province.

A third school in the same district as the matched pair was then selected so as to provide a different perspective (for example, urban or rural) to the findings derived from the matched pair. Within each sub-sample of three schools, then, there is a matched pair of two schools in the same type of location (urban or rural) and a third school drawn from a different setting. The third school was either high- or low-performing and is known as the outlier. These triplets of sampled schools are shown in **Table 2**.

Table 2: Sample schools arranged in triplets

District	Level	Location	Performance	Code*
A	Primary	Rural	High	APRH
		Rural	Low	APRL
		Urban	Low	APUO(L)
	Secondary	Rural	High	ASRH
		Rural	Low	ASRL
		Urban	Low	ASUO(L)
B	Primary	Urban	High	BPUH
		Urban	Low	BPUL
		Rural	High	BPRO(H)
	Secondary	Urban	High	BSUH
		Urban	Low	BSUL
		Rural	Low	BSRO(L)
C	Primary	Rural	High	CPRH

District	Level	Location	Performance	Code*
		Rural	Low	CPRL
		Urban	Low	CPUO(L)
	Secondary	Rural	Low	CSRL
		Rural	Low	CSRL(1)
		Urban	High	CSUO(H)
D	Primary	Urban	High	DPUH
		Urban	Low	DPUL
		Rural	Low	DPRO(L)
	Secondary	Urban	High	DSUH
		Urban	Low	DSUL
		Rural	High	DSRO(H)

* A-D indicate province; P or S indicate primary or secondary level; U or R indicate urban or rural location; H or L indicate high- or low-performing; O indicates outlier school.

In one instance, the sampling logic was modified when the high-performing secondary school in district C informed fieldworkers the week before the visit that the school does not offer Mathematical Literacy (having made no mention of this during previous contacts). All attempts to contact the replacement school were unsuccessful and therefore the replacement for the low-performing high school in the province was visited. Thus the CSRH school was replaced with CSRL (1) and the two secondary schools in district C are both low-performing.

Another deviation from the procedure described above occurred in District B, where a rural primary outlier could not be found in the same district as the matched pair. Consequently, school BPRO(H) is not in District B, but in another district in the province.

3.3.1 Risks embedded in the sampling method

Although they are the best available indicators for distinguishing between above- and below-average performing schools, the risks inherent in the indicators of school performance used in the present evaluation – Grade 2 Mathematics scores in the ANA and the NSC pass rate – may significantly undermine the reliability of the outcome. In selecting an indicator for primary schools, a choice is offered between computing a composite ANA score or taking a more specific score as the measure. A composite score is more likely to reveal school-level effects (leadership and management practices), a route taken by Kotzé (2016) in her search for Quintile 1-3 schools that performed above average in the ANA. In contrast, since it is focused on curriculum implementation, the present evaluation prioritised the search for teacher-level characteristics and, towards this end, used a very specific ANA score (Grade 2 Mathematics) to distinguish high- and low- performing schools. The first risk inherent in this strategy is that it is prone to within-school variation: the 2014 Grade 2 Mathematics scores in any school may be influenced by a weak cohort, one or two good/bad teachers who may have since left the school, good/bad teaching of Mathematics in Grade 1, etc. But if one is interested in how Grade 2 teachers are implementing CAPS, then the Grade 2 ANA Mathematics scores are the closest the researcher is likely to get, although this may not be close enough to be reliable in distinguishing high- and low-performing schools.

A second risk in using ANA scores, whether composite or specific, as measures of school or teacher effectiveness lies in the extent to which cheating occurs in the administration, marking, collation and reporting of the tests. Gustafsson (2014) has shown that cheating is a significant factor. Thus, a school identified by their ANA scores as high-performing may, in fact, just be good at cheating. On the other hand, it can also be argued that if a school is efficient at cheating, this at least shows some level of organisation and coherence with respect to curriculum activities. Either way, there is a level of uncertainty inherent in using scores to distinguish school performance.

Regarding the indicators for high school performance, one may expect the NSC results to provide more reliable indicators, since the NSC examinations are closely monitored, quality controlled and moderated, and follow predictable patterns over time. But here too, risks are apparent. For example, several commentators demonstrate the weakness of the pass rate on its own to indicate superior learner performance, since the metric is open to manipulation (Taylor, 2009). Indeed, in recognition of this factor, the Council of Education Ministers in 2015 approved a set of six Grade 12 indicators to receive special emphasis in planning and reporting at national, provincial, district and school levels: overall pass percentage; Mathematics pass percentage; Physical Sciences pass percentage; Bachelor attainment percentage; distinction percentage; and throughput rate.

If the DBE's own recommendations concerning the importance of Language (the LOLT and particularly EFAL) were to be heeded, then EFAL scores would be at the top of this list. Unfortunately, this has not been the case and, at the start of 2017, the NSC pass rate was once again celebrated as the only indicator of NSC success. This resulted in the Free State claiming first place in the 2016 NSC, despite the fact that the province maintained the lowest throughput rate (Spaull, 2017). In short, a high NSC pass rate does not necessarily indicate a school which provides good education to the greatest number, but may in fact be achieved through manipulation, to the detriment of many students. The school described in Box 5 is a manifestation of this phenomenon.

In summary, it should be clear that a founding principle of the evaluation design is under threat because of the uncertainties surrounding the reliability of using ANA or NSC scores to differentiate between schools of different educational quality. This discussion is continued in the light of evidence arising from responses to Q1.4: *Do instructional leaders use assessment as recommended by CAPS?* (See the discussion commencing on page 41, especially), and Question 1.8: *Is time optimally managed at the school level?* (See page 58).

All schools in the sample were visited by a team of two fieldworkers for two days. Difficult conditions in accessing two rural schools in District A resulted in a curtailment of the visit on the first day, resulting in a loss of some data (such as examining only one Grade 2 teacher rather than two). In some schools, some of the data, such as teacher lesson plans or DBE workbooks, was not available, which is itself a telling statistic. While this missing data is regrettable, sufficient information was collected to provide a detailed picture of each school.

3.4 Method

Eight evaluation activities were undertaken in pursuit of finding answers to the questions posed in section 2.

3.4.1 Interviews with key curriculum managers at national, provincial and district levels

At national level, a total of 13 DBE officials were engaged in 8 separate interviews (N1-N8), while 16 provincial officials were engaged by means of a questionnaire, as detailed in Table 3.

Table 3: National and provincial level interviews[1]

Level	Designation	Interview	Interviewee title/field
DBE Interviews	Senior management	N1	Director General
		N2	DDG: Curriculum
		N3	CD: Curriculum
		N4	Director: CI & QI for FET
		N5	CES languages FET
		N6	CES Maths Lit
	Curriculum Steering Com	N7	CA1
			CA2
			CA3
	DBE reps on HEDCOM Curriculum Sub-com	N8	Maths, Science & Technology (MST)
			Teacher and Curriculum Development
			Early Childhood Development (ECD)
			Continuous Professional Development (CPD)
Provincial Questionnaires	Provincial representatives on HEDCOM Curriculum Sub-Com	Q1	P
		Q2	B1
		Q3	Q
		Q4	R1
		Q5	R2
		Q6	R3
		Q7	R4
		Q8	S
		Q9	B2
		Q10	B3
		Q11	B4
		Q12	B5
		Q13	B6
		Q14	B7
		Q15	B8
		Q16	B9

Key: N1-8 indicate 8 separate interviews with DBE officials; P, Q, R, S and B denote provinces, of which only B is part of the evaluation sample; Q1-11 indicate questionnaires returned by 11 provincial respondents; B1-9 denote 9 individual responses from province B.

Except for the meeting with provincial representatives on the HEDCOM Curriculum Sub-Committee, by and large the meetings went smoothly, with only one having to be rescheduled. It was intended to conduct a focus group interview with the provincial officials immediately after their meeting in Pretoria in June. However, this had to be reorganised because the Sub-Committee meeting ran over time and travel arrangements precluded the possibility of meeting later. As a result, provincial curriculum managers had to be engaged by means of questionnaires distributed by email from the DBE; although the engagement was extended over several months, not all representatives responded.

At district level, nine face-to-face interviews were conducted by the same interviewer with a total of 23 officials in the four districts targeted. The titles of interviewees, together with their distribution across the nine interviews, are shown in **Table 4**.

[1] CA – Curriculum Advisor; CD – Chief Director; CES – Chief Education Specialist; CI – Curriculum Implementation; CQ – Curriculum Quality; DCES – Deputy Chief Education Specialist; DDG – Deputy Director General; HEDCOM – Heads of Education Departments Committee.

Table 4: District level interviewees[2]

District	Interview	Interviewee title
A	Aa	CES, Governance and Management
	Ab	DCES assessment and exams
		DCES languages, FET
		DCES maths and sciences, FET
	Ac	DCES (Senior SA for FP)
		SES (Languages, FP)
B	Ba	DCES FET
		SES EHL
		SES EFAL
		FET Maths facilitator
		SES FP
		DCES SP
C	Ca	District Director
	Cb	DCES FP – all subjects
		SES isiZulu – FET
		SES EFAL – FET
		SES EFAL – FET
D	Da	CES for GET
	Db	Maths, assisting to manage all FET SAs
		CEC exams and FET curriculum
	Dc	SES maths
		SES SiSwati
		DCES

Although specific arrangements were made to interview the District Directors, in all but one case, the Directors' attention was diverted away from the interview at short notice. In two cases, senior managers stood in for the Director, but in one case this was not possible.

A semi-structured instrument was used to elicit information on fifteen of the evaluation sub-questions shown in Appendix B: Evaluation matrix. Interviews lasted around one hour and were recorded in writing by the interviewer. Interviews were conducted on the understanding that the names of individuals and institutions would remain strictly confidential.

3.4.2 School interviews

Interviews were conducted with the principal, FP HOD and two Grade 2 teachers in the 12 primary schools; and with the principal, HODs for FET Language and Mathematics and one Grade 10 teacher for each of EFAL, Mathematics and Mathematical Literacy in the 12 high schools. Each school was visited by a team of two researchers for two days.

3.4.3 Classroom observations

One lesson each in home language, EFAL and Mathematics of the Grade 2 teachers interviewed was observed. In the high schools, one lesson each in EFAL, Mathematics and Mathematical Literacy of the Grade 10 teachers interviewed was observed. The intention was to observe lessons as follows:

[2] CES – Chief Education Specialist; DCES – Deputy Chief Education Specialist; SES – Senior Education Specialist.

Primary	Minimum of 1 Grade 2 teacher per school, teaching 3 lessons in HL, Mathematics and English:	3 lessons
	Maximum of 2 Grade 2 teachers per school, each teaching 3 lessons in HL, Mathematics and English:	6 lessons
Secondary	Minimum of 3 Grade 10 teachers, teaching one lesson in each of Mathematics, Mathematical Literacy or EFAL:	3 lessons

Not all interviews were conducted as planned, although the actual numbers came close to the target. Altogether 35 secondary teachers and 22 primary teachers were interviewed and observed for a total of ninety-six lessons. The distribution of interviewees and observations by district and subject is shown in **Table 5**.

Table 5: Lessons observed

Level	School	Teachers interviewed	Observations					Type		
			HL	EFAL	Maths	School subtotal	District subtotal	H	L	O
Primary	APRH	1	1	1	1	3	9	21	19	21
	APRL	1	1	1	1	3				
	APULO	2	1	1	1	3				
	BPUH	2	2	2	2	6	16			
	BPUL	2	2	1	1	4				
	BPRHO	2	2	2	2	6				
	CPRH	2	2	2	2	6	18			
	CPRL	2	2	2	2	6				
	CPULO	2	2	2	2	6				
	DPUH	2	2	2	2	6	18			
	DPUL	2	2	2	2	6				
	DPRLO	2	2	2	2	6				
	Total	**22**	**21**	**20**	**20**	**61**	**61**	**21**	**19**	**21**

Level	School	Teachers interviewed	EFAL	Math	Math Lit	School subtotal	District subtotal	H	L	O
Secondary	ASRH	3	1	1	1	3	9	11	12	12
	ASRL	3	1	1	1	3				
	ASULO	3	1	1	1	3				
	BSUH	3	1	1	1	3	9			
	BSUL	3	1	1	1	3				
	BSRLO	3	1	1	1	3				
	CSRH	3	1	1	1	3	9			
	CSRL	3	1	1	1	3				
	CSUHO	3	1	1	1	3				
	DSUH	2	1	1	0	2	8			
	DSUL	3	1	1	1	3				
	DSRHO	3	1	1	1	3				
	Total	**35**	**12**	**12**	**11**	**35**	**35**	**11**	**12**	**12**

Key: HL – Home language, EFAL – English First Additional Language, M – Maths, ML – Maths Literacy.

In searching for an appropriate set of indicators for undertaking the classroom observations for the CAPS implementation evaluation, the findings of the exhaustive review undertaken by Coe and his colleagues seemed most suitable, based as it is on a definition of 'effective teaching as that which leads to improved student achievement using outcomes that matter to their future success' (Coe et al, 2014: 2). Sifting through the literature from this perspective, Coe et al. identified six characteristics of 'great teaching', divided into three categories, depending on the strength of the evidence indicating each one's effects on learning (**Table 9**).

Using Coe's categories, and focusing on those he considered to have the strongest effects, we defined eleven indicators of good pedagogy. Great teachers:

1. Possess content knowledge of the subjects they teach **(CK)**;
2. Exhibit the ability to identify and understand the thinking behind learner misconceptions and bring the learner to a better understanding **(PCK)**;
3. Employ questioning techniques as a pedagogical tool **(Q tech)**;
4. Respond appropriately to learner questions **(Q resp)**;
5. Provide model responses to tasks **(Mod ans)**;
6. Give adequate tasks for individual practice (tasks engage INDIVIDUAL learners; sufficient time and range of tasks to engage all learners; opportunity for teacher to assess the progress of each child) **(Prac)**;
7. Progressively introduce new learning (this is about appropriate pacing and sequencing) **(P&S)**;
8. Offer differentiated instruction for different learner levels **(Diff)**;
9. Make efficient use of lesson time **(Time)**;
10. Coordinate classroom resources and space **(Res)**; and
11. Manage learners' behaviour **(Behav)**.

Four degrees of competence were defined for each of the 11 indicators by means of a short description, from *ineffective*, through *emerging* and *developing,* to *insightful*. An example is given in **Table 6**. The quality of each lesson was assessed by the observer using a rubric made up of such descriptions for each of the 11 indicators of good pedagogy. Aside from the

rubric used to assess pedagogic competence on the 11 indicators, other sections of the classroom observation instrument provided for narrative descriptions of various aspects of the lesson and checklists for recording books seen in use and the proportion of reading, writing and talking occurring in the lesson.

Table 6: Example showing the degrees of competence on one indicator of good pedagogy

Indicator	Descriptions of typical pedagogical behaviour at four levels of competence			
	Ineffective	Emerging competence	Developing skilled competence	Insightful teaching competence
Responses to learner questions (Q resp)	Learners never ask questions; or if they do they receive no sensible feedback.	Few questions asked by learners; teacher responses are ineffective, failing to use the opportunity to consolidate learner understanding.	A fair number of learners ask questions (5-10); teacher responds; learner told that the answer is right or wrong, some comment but not elaborated.	Learners free to ask questions; teacher gives detailed feedback, correcting misconceptions, reinforcing or elaborating learner understanding; may involve class in discussion.

Three measures were adopted to promote reliability across the team of observers in the use of the rubric. First, observers were employed who were known to be competent teachers and experienced in similar research work. Second, observers were trained by observing video-taped lessons, assessing the lesson independently using the rubric and then comparing and discussing their judgements with each other. Third, observers worked in pairs, with the three schools in each triplet of schools being evaluated by the same pair, ensuring that the results for the schools in each triplet are comparable, even if comparisons between individual triplets may be less reliable.

In order to reveal patterns in the lessons observed, ordinal variables 1 through 4 were assigned to the four degrees of competence on each indicator of pedagogic competence, with 1 signalling ineffective pedagogy and 4 signalling insightful teaching. If an indicator was not observed in a particular lesson, the indicator was assigned 0. Although these are ordinal variables and therefore strictly not amenable to mathematical manipulation, they are treated as interval variables and the scores for all the lessons observed in each of the 24 schools were added to provide a mean score per school. But the limitations of this approach must be kept in mind, in particular that the intervals between successive scores on the same indicator are not comparable, nor are the same scores on two different indicators. In other words, the numbers produced by this procedure provide only the crudest of trends exhibited by the indicators.

3.4.4 Learner book analysis

In primary schools, fieldworkers requested the DBE workbooks of four learners in the EFAL and Mathematics classes taught by the two teachers interviewed. If there were only two Grade 2 classes, the data collectors took four books from each class. If there were three Grade 2 classes, then two books were taken from each of the two classes that were observed and four

books were taken from the third class. The learners' books were selected by asking the teachers for the books of best learners in their class. This resulted in eight books being inspected in each school, except in province A, where these plans could not be fulfilled because of the great distances to two schools in this deep rural area. In addition, data is missing from school BPUL. Fieldworkers noted the numbers of pages completed by learners.

In addition, the exercise books of two Grade 2 learners in each of the three subjects (HL, EFAL and Mathematics) for each of the teachers interviewed were examined. Fieldworkers counted the number of pages written for each of the main topic areas specified in the respective curricula.

In secondary schools, the exercise books of two learners of each of the teachers interviewed were analysed. Fieldworkers counted the number of exercises in each content area.

3.4.5 Examination of teacher and school documents

The term plans, assessment records and assessment tasks of the teachers interviewed were examined. The timetables of schools visited were analysed with a view to assessing the time allocated to the subjects in which lessons were observed.

3.4.6 Administration of teacher tests

Tests in English and Mathematics were administered to the Grade 2 teachers interviewed. The Grade 10 EFAL teachers were set the same English test as that written by the Grade 2 teachers, while the Grade 10 Mathematics and Mathematical Literacy teachers sat for the same Mathematics test. Details of test design, administration procedures and results are discussed in the section on teacher knowledge starting on page 67 below.

3.4.7 Observations of school time management practices

Fieldworkers walked around the school during the last period of the first day of the visit and the first period of the second day, noting how many classes were without teachers and the extent to which learners were out of class.

3.5 Data Capture and Analysis

The majority of instrument items are structured and amenable to quantitative capture. Free response items were kept to a minimum, but are necessary to understand educator views and the motivation behind their behaviour. Even in this case, an attempt was made to guide field observations toward objective criteria: for example, the 'qualitative' instrument for classroom observation required fieldworkers to make judgements on a 4-point descriptive scale regarding the quality of teacher/learner interactions on 11 key pedagogical dimensions (see section on pedagogy starting on page 67).

Quantitative data (including much of the classroom observation data) was captured and analysed in Excel or STATA. Interviews were captured in real time in Word. Because of its relative paucity, it was possible to analyse the qualitative data 'by hand', using nothing more sophisticated than Excel. The details are discussed in the relevant sections below.

3.6 Risk, Reliability and Insight

The first point to note regarding the validity (is it true to reality?) and reliability (will Observer A see the same picture as Observer B?) of the kind of data on which much of this report is based is that it is fraught with more risks in some regards and fewer in others, when compared with quantitative survey data. First, the data is not representative in any sense: for example, the interviews conducted in any district cannot provide a full picture of how the district conducts its instructional leadership activities, nor do they give much indication of the extent to which the practices in District A represent districts in the rest of the province, let alone the country.

A second kind of risk is posed by what is referred to as 'socially desirable' responses. This is where respondents do not describe what is actually happening or what they actually feel about an issue, but rather reflect what they consider to be the 'right' answers. This problem is addressed through the technique of triangulation, where two or more respondents are asked the same question and their answers compared: differing answers provide a strong indication that one or both are dissembling, although this technique cannot identify false positives. Examples of this occur in a number of the tables below, but it is perhaps best illustrated in the section examining instructional leadership with respect to assessment at school level, starting on page 41.

What this kind of data does give, and what makes it complementary and often superior to large-scale survey data, is that it provides insights into behaviours and attitudes that are typical in one or more parts of the system, in this case Quintile 1-3 schools and their districts in one rural, two peri-urban and one urban location. The data provided by the present study enables subtleties of comportment and culture to emerge, which would not necessarily be apparent in a survey: how people regard one another and the work they are doing is best captured in open-ended responses, through the words and anecdotes chosen by the speakers themselves. In this sense, the current evaluation attempts to *understand* the practices and attitudes of educators which have become generally known over the past two decades and to identify the underlying causes of the very low levels of efficiency and performance which characterise the Quintile 1-3 sector of the school system.

Herein lies one of the risks entailed in qualitative data, at the heart of which lies the question of reliability. Eliciting, capturing and interpreting the views of interviewees are themselves skills distributed in varying degrees across a team of fieldworkers. It follows that the data collected from teacher A or school X is not necessarily comparable when collected by different fieldworkers. This problem was addressed through training of fieldworkers and assigning the same two-person team to all three schools in each triplet; furthermore, after visiting all three members of the triplet, fieldworkers were required to compare and rate instructional leadership practices across the three schools, explaining their ratings. In this way, the comparability of schools within each triplet was optimised.

All the district interviews were conducted by a single interviewer and thus this data is directly comparable.

3.7 Evaluation Criteria

Four main evaluation criteria were used to assess the extent to which CAPS is being implemented.

Appropriateness includes an assessment of the relevance of the intervention, but also addresses its tailoring to local needs, priorities and skills;

Effectiveness refers to the extent to which an intervention achieves its intended objectives and outcomes and identifies key factors influencing the achievement or non-achievement of these;

Equity refers to fairness and justice and as an evaluation criterion it considers the extent to which the implementation of CAPS is fair and does not exacerbate social inequality;

Efficiency is a measure of the extent to which the ratio of inputs - such as funding and human resources - required to achieve the desired outputs and outcomes are economical and productive.

Impact refers to long-term effects produced by the intervention and;

Sustainability refers to the continuation of the benefits of the intervention after it has ceased

As an implementation evaluation, the present study did not directly study the impact and sustainability of CAPS; but some evidence is presented concerning its *likely impact* and *sustainability*.

3.8 Reporting

The format of this report does not follow the pattern of traditional case study reports. There are two main reasons for this. First, the number of cases is too large, the field time allocated to each too short and the number of indicators targeted too numerous to provide the kind of qualitative 'thick descriptions' which characterise true case studies. For example, one of the best examples of such work is the description of 10 schools in England which perform better than expected given the socio-economic status of their learner communities. The work is summarised in the 300-page book, *Success Against the Odds: Effective schools in disadvantaged areas,* published 20 years ago (Maden, 1996). Providing such extensive descriptions for each of the 24 schools sampled for the present evaluation, on all the indicators targeted, would have resulted in an unmanageably long report. Besides, fieldworkers could not spend more than two days in each school, compared with the many days, spread over an extended period, required to understand the culture and operating procedures of any one institution.

The initial decision regarding the structure of the present report, therefore, was to write eight mini-case studies, grouping the three members of each triplet of schools together and focusing on similarities and differences within the group. However, this approach also proved to be unsatisfactory, since the 24 schools in the sample differ very little from each other with respect to the key indicators such as time management, presence and use of books, pedagogy, assessment practices and the like. Thus, despite their differentiation into 'high-' (H) and 'low-performing' (L), the only systematic differences within the group were that rural schools function significantly less well than urban schools, whatever their performance designation. This provided the second reason not to follow a case study approach in structuring the present report: it would have resulted in eight narratives very similar to one another. This is not to say that there are no theoretically interesting similarities and differences between the schools, but these followed no systematic patterns with respect to the independent variables: ANA Grade 2 Mathematics score; and NSC pass rate. The argument is illustrated in a number of the tables below; again, school-level instructional leadership practices with respect to assessment provides one of the best examples of this feature as discussed in some detail in the text accompanying **Table 10** and **Figure 4**.

It was decided to write up the evaluation findings according to the evaluation questions and sub-questions listed above. These are presented largely in the form of tables showing performance on the sub-questions, supported by narrative text and, where appropriate, 'thick descriptions' and quotes from participants to provide details of particularly illuminating examples.

The remainder of the report has the following structure:

Section 3.9: Literature Review summarises lessons from both the South African and international literature and draws lessons for the present evaluation.

Section 4: Findings presents the evaluation findings according to the evaluation questions and sub-questions, clustered into themes.

Section 5: Answers to the Evaluation Questions draws together the evidence to provide answers to the first six evaluation questions.

Section 6: Conclusions examines the evidence from the perspective of the six evaluation criteria: effectiveness; appropriateness; equity; efficiency; likely impact; and sustainability.

Section 7: Recommendations lays out a set of five main recommendations, elaborated by means of sub-recommendations, designed to institute the six key interventions required to improve performance on the evaluation criteria.

3.9 Literature Review

The literature review follows the logic encapsulated in the TOC in **Figure 2** and summarises the research evidence pertaining to each node. Each of the seven nodes in the TOC depends on a number of conditions to function optimally in playing its part in delivering the curriculum. One of the purposes of the literature review was to identify these dependencies in order to investigate them during the fieldwork.

3.9.1 Node 1: Curriculum design

Curriculum design is the start of the curriculum train, occupying Node 1 in **Figure 2**. South Africa has undergone three major developments with regard to the design of the curriculum since the advent of democratic rule in the county in 1994 (**Table 7**).

Table 7: Changes in the South African primary school curriculum 1990 – 2011

Curriculum	Abbreviation	Date
Christian National Education	CNE	Before 1994
Curriculum 2005	C2005	1998
National Curriculum Statement	NCS	2002
Curriculum and Assessment Policy Statements	CAPS	2012

The international literature on curriculum reform is vast and we do not intend to enter this field in any systematic way here. What is relevant, however, is the relatively recent discussion on outcomes-based education (OBE), which has dominated much of the South African debate since 1994. The Western Australian experience is especially pertinent in this regard, given the heavy influence of Australian debates on developments in South Africa throughout the nineties, and the almost uncanny parallels between the two countries in respect of how these debates influenced the school curriculum. Thus, both South Africa and Western Australia implemented an OBE curriculum in 1998, centred on very broadly defined learning outcomes, a design element which in turn was founded on assumptions of high levels of teacher capacity to interpret and operationalise the curriculum to suit their particular learners. One significant difference is that South Africa realised the impracticality of this approach, as reflected in a major review in 2000 (DOE, 2000), nearly a decade before this perception crystallised to the extent that a review was commissioned by the Western Australian government (Andrich, 2009). Nevertheless, both reviews produced very similar diagnoses and proposed very similar recommendations.

The review of Western Australia's *Curriculum Framework for Kindergarten to Year 10* is of particular interest to South African students of the school curriculum. The review noted that the CF was being implemented with some success in only the most highly resourced schools, where resources are defined as including not merely the material, but also a professional way of working among teachers and school management, and the cultural capital that goes with high levels of parental involvement in the school (Andrich, 2009). A central feature of such schools is stable, experienced leadership and teachers who have time to reflect on curriculum implementation, support each other and have ready access to high quality professional development. Most schools in Western Australia, the review concluded, do not possess these

resources, and those that took the task seriously of fulfilling the design intentions of the CF often felt overwhelmed; under these circumstances, policies designed to assist teachers and schools, may end up doing the opposite by placing further demands on their time and 'a reduction in the specific teaching of content' (Andrich, 2009:17).

A central recommendation review of the CF in Western Australia was that more explicit syllabuses be developed that describe the knowledge, skills and understanding expected of children in each phase of schooling, giving structure and direction for teachers. With respect to assessment, the review of the CF concluded that the approach was too time consuming, thus distracting teachers from teaching, and that demands on teachers in this regard by greatly simplified. In both these areas the recommendations for Western Australia closely paralleled those in South Africa, although in the field of curriculum design, the former (Andrich, 2009) lagged well behind the latter (DOE, 2000), while in the field of assessment, the conclusions were reached virtually simultaneously (Andrich, 2009; DBE, 2009), and apparently independently of one another. What these parallels tell us is that that explicitly defined forms of curriculum and assessment policy and practice are more amenable to implementation, across a wide range of contextual conditions, than curricula based on broadly-defined outcomes and very complex forms of assessment. In other words, the research evidence provides reassurance that CAPS is on the right track in terms of its design features.

South African developments since the implementation of the controversial C2005 (**Table 7**) reveal successive attempts to specify more clearly what learners are expected to know and be able to do, by grade and subject. Most recently, reducing curriculum load was one of the driving intentions behind the review of the NCS and the design of CAPS (DBE, 2009). The CAPS design went far further, providing, in addition, detailed guidelines to teachers regarding pacing and pedagogy. As a result, CAPS documents are generally much longer than those of the NCS, the extreme example being the English version of the CAPS for FP Mathematics, which runs to 518 pages. In this regard, anecdotal evidence indicates that teachers find CAPS long and crowded and that they are overloaded with testing and assessment administration (Goetze, 2017). If this is a widespread view, then CAPS is not addressing one of the main criticisms of its predecessor. Anecdotal evidence is, however, unreliable and these perceptions were probed by the present evaluation.

The design of CAPS was subjected to an evaluation by Umalusi and, in 2014, the first reports arising out of this work were published, reflecting a comparison of CAPS with its predecessor with respect to 11 'gateway subjects' in the FET Phase, including those targeted by the present evaluation: English (both Home Language [EHL] and First Additional Language [EFAL]), Mathematics and Mathematical Literacy (Grussendorff, Booyse and Burroughs, 2014). The investigation required teams of subject evaluators to grapple with issues around curriculum framing and concepts such as content breadth and depth, sequencing, progression, coherence and subject weighting. The evaluation also looked at pedagogical and assessment advice given to teachers and the format and user-friendliness of CAPS.

Of particular concern to each of the Umalusi subject teams was the balance between breadth and depth, since covering too many topics leads to the risk of losing depth of understanding. For this purpose, depth of understanding is defined as the extent to which the curricula provide learners with the opportunity to move from a superficial or primitive grasp of a topic to a more refined and powerful grasp of it.

The evaluation concluded that in Mathematics the number of sub-topics in the CAPS has increased in each grade compared with the number in the NCS, while overall there has been an increase of 15% in the total number of sub-topics prescribed across the FET Phase. The evaluation team expressed concern at this increase in breadth, especially in a curriculum already challenging for teachers to manage. The team commented that this increase in breadth could lead to teachers either omitting certain sub-topics or compromising on the depth at which the sub-topics are dealt with. An increase in depth from the NCS to the CAPS was

also noted. The evaluation team concluded that the addition of high demand topics like Euclidean Geometry and Probability, together with the increased demand in Statistics and Data Handling and a slight increase in demand in Algebra, means that the CAPS is likely to be significantly more demanding than the NCS.

The EHL evaluation teams appointed by Umalusi concluded that the breadth across the FET Phase is similar for the NCS and the CAPS. The evaluators could not comment on depth, since this is left to the discretion of the teacher in terms of the length and complexity of texts that are selected. The teams commented that although some guidance is given in the CAPS around the selection of appropriate texts, it is insufficient to ensure a common understanding of the level of depth that is required.

The EFAL evaluation team reported a reduction in overall depth from the NCS to the CAPS and expressed the concern that the list of content topics that is prescribed in the content overview remains too broad and that learners will require more time to engage meaningfully with all of the curriculum demands. The team commented that this problem is likely to be exacerbated by the finding that the teaching plans provided by CAPS lack the level of detail needed for teachers to know at what level or depth a skill needs to be taught.

This conclusion has serious implications concerning EFAL, particularly when taken together with the findings of the Ministerial Task Team on the NSC, which concluded that the level of cognitive demand posed by the EFAL NSC examinations was too low to adequately prepare even school-leavers who achieved good results for higher education study (DBE, 2014c). It is one thing to have access to the NSC, but quite another to be adequately equipped to gain a pass in the NSC examinations, let alone to do well enough to achieve success at the tertiary level. The Ministerial Task Team on the NSC (DBE, 2014a) characterised many students in the school system as 'semi-lingual', both in the Language of Learning and Teaching (LOLT) and their Home Language, exhibiting small vocabularies and incorrect grammar, consciously thinking about their language production, being stilted and uncreative in both languages and finding it difficult to think and express emotions in either language.

Inadequate command of the LOLT among 80% of learners impacts on their understanding of all their school subjects. This situation is reinforced by the low expectations for students' proficiency in EFAL, as reflected in the predominance in the NSC examination papers of lower-order questions such as literal comprehension and grammar translation tasks, with far fewer questions testing the higher-order cognitive processes of inference, evaluation and appreciation; the majority of questions require short answers and students can avoid writing an essay response in Paper 2 (Literature).

The Umalusi Mathematical Literacy evaluation team could not compare the depth of the curricula because the NCS appears to define depth in terms of the mathematical processes involved, whereas the CAPS defines depth in terms of the level of problem-solving required within the selected real-life situations or contexts. In any event, Mathematical Literacy is a new subject and hence not directly comparable to anything in the NCS. The Mathematical Literacy evaluation team did find, however, that the work schedules in CAPS do not provide sufficient detail about the actual content to be taught or the resources needed for teaching to allow for a clear sense of pacing. In the other subjects, the Umalusi evaluation teams found that the level of specification of content is higher in the CAPS than in the NCS: more detail is provided on the exact scope and depth of the content that is to be taught and assessed.

Overall, the evaluation teams concluded that the CAPS documents are an improvement over the NCS in terms of the design and structure of the curricula. Furthermore, all of the 11 subjects examined in the Umalusi evaluation, with the exception of language, were reported to demonstrate a clear progression across the grades. The evaluation teams were in agreement that the CAPS has attempted to simplify the elaborate approach to assessment in

the NCS and that the CAPS documents are an improvement over the NCS in terms of the design and structure of the curricula.

The Umalusi Overview Report recommended to the DBE that the Mathematics, EHL and EFAL curricula require urgent attention within two years and that this review be followed by an eight year cycle in which all the subjects are in turn reviewed (Grussendorff et al., 2014). This was not the only time that a major report has commented unfavourably on the CAPS EFAL curriculum: also in 2014, a Ministerial Task Team on the National Senior Certificate found that, because of the very low standard set by NSC exam papers, the large majority of matriculants are ill-equipped for university study (DBE, 2014a). The implication is that raising the standard of EFAL to include more sophisticated cognitive processes – inference, deduction, analysis, justification – is key to raising performance across the curriculum.

The Umalusi report further recommended that there is a need to slow down the pace of curriculum change in order to allow teachers, university schools of education and the national and provincial departments of education (PEDs) to work towards a common understanding of what needs to be taught and learned. In other words, there should be delivery on the other major recommendations proposed in the 2009 DBE report on the implementation of the national curriculum. Seen from this perspective, the decision by the DPME to focus the current evaluation on implementation is most appropriate.

3.9.2 Node 2: Materials

Node 2 in Figure 2 concerns learning and teaching support materials (LTSM). Textbooks and other materials embody the intended curriculum, exemplifying the level of cognitive demand appropriate for the respective grade level, detailing the progression between concepts in hierarchical subjects such as Mathematics, Accounting and the Natural Sciences and explicating the consequential links between ideas and events in the Social Sciences. Indeed, in the American literature, it is common to conflate the terms 'curriculum', 'curriculum materials' and 'textbooks' and to assume that, typically, they determine the content of the subjects to be taught' (Confrey and Stohl, 2004).

The South African government, in both national and provincial spheres, has made a significant effort to increase the supply of LTSM to schools in the last six or seven years. The effects of these efforts depend on the extent to which the book pipeline continues unbroken, from policy at national level, through budget allocations and supply chain management in the provinces, down to delivery to schools and, finally and most importantly, to productive use of books in classrooms. It is the last of these elements, classroom use, on which the present evaluation focuses.

Much is already known about the supply and use of books in schools, most recently through the work of the National Education Evaluation and Development Unit (NEEDU). In the three year period spanning 2012 to 2014, NEEDU visited a total of 536[3] schools representing the principal types comprising the school system, excluding schools for learners with special needs (LSN). The schools visited were located across all 86 districts in the nine provinces. At FET level, interviews with teachers in 2014 revealed that only 57.0% of the schools in the sample reported that every learner had a textbook for mathematics. This was considerably lower for English, with only 34.4% of the schools reporting that every learner had a book. The NEEDU report noted that the lack of reading material in so many schools is a major contributing factor to the underdevelopment of English language skills (NEEDU, forthcoming). The acute shortage of LTSM in a significant proportion of schools in the NEEDU sample is serious, especially in the schools that reported fewer than half of the learners had a book in Mathematics (8.4%) and English (16.1%). In these schools, learners must share books,

[3] These comprised 134 urban primary schools (NEEDU, 2013), 99 monograde rural and 120 multigrade rural primary schools (NEEDU, 2014), and 183 urban and rural high schools (NEEDU, forthcoming). LSN schools were visited in 2015, but this data is still under analysis.

sometimes with more than one person. This detracts from the focus needed for independent work.

One of the most important government programmes with respect to LTSM is the development of workbooks in the Languages and Mathematics and their supply to all learners in Grades 1 to 9. The programme commenced in 2011 and workbooks are now available in all 11 languages for Grades R to 6 in the learning area of Language; in Mathematics, the workbooks are supplied in the 11 Official Languages for Grades 1 to 3 and in English and Afrikaans for Grades 4 to 9. Every child receives two workbooks a year in each of these subjects; each workbook is made up of 128 worksheets, comprising four worksheets per week, divided over eight weeks per term. According to the DBE (2017), the workbooks are intended to provide learners the opportunity to practise the language and numeracy skills they have been taught in class; they are also meant to help teachers track the progress of learners and provide extra support if needed. The learners write directly in the books, which are supplied anew every year.

Shortly after their introduction, the DBE commissioned the Australian Council for Educational Research (ACER) to evaluate the workbooks and the Siyavula textbooks in Mathematics and Physical Science for Grades 10-12 (Outhred et al., 2013). The almost complete neglect of the Siyavula textbooks in the evaluation of Siyavula materials, accompanied by an intense focus on the workbooks, is indicative of the relative neglect of FET level materials in the research literature. Aside from mentioning that the workbooks and the textbooks were found to meet the characteristics of quality workbooks, as defined by the international literature, the report is entirely concerned with the quality and use of the workbooks. The implication is that the quality of FET level LTSM is satisfactory, while fundamental questions remain around the design and deployment of primary school materials, particularly at FP level (Katz, 2013a; 2013b SAIDE, 2012).

For the workbooks, the evaluation sampled 327 schools nationally through a survey sent to five teachers in Grades 3, 6 and 9 selected randomly in each school. Three schools were also selected for case studies. Using criteria drawn from a literature review on the characteristics of quality workbooks and textbooks, the evaluation concluded that the workbooks and the textbooks had the characteristics of quality workbooks. The values of South Africa were assessed to be observable to a greater extent in the workbooks than in textbooks. The fieldwork study found that 80% of schools reported that the workbooks were being used, at least by some teachers. In short, the ACER evaluation of the DBE workbooks concluded that while improvements are possible, particularly with respect to teacher training, the workbooks are more than adequate and are being widely used by learners.

A deeper evaluation of the content and structure of these materials was undertaken by Hoadley and Galant (2015a), who set out to evaluate the extent to which the workbooks provide effective tools for practising curriculum content and for monitoring and assessing student work; the authors sampled the two 2015 Grade 3 EHL and the two Grade 3 Mathematics workbooks in their entirety. Grade 3 was selected as a critical point, being the summation of the FP. EHL was selected rather than EFAL on the grounds that it is the basis for the development of other language workbook texts and thus merits close consideration. The degree to which the workbooks are aligned with the curriculum was assessed by comparing the content of the books with the relevant CAPS documents.

Regarding curriculum alignment of the EHL Grade 3 books, Hoadley and Galant found that while the workbooks do not cover handwriting, listening skills or vocabulary development, they do offer comprehensive compliance with CAPS regarding writing, language structure and use, grammar and phonics. However, with respect to conceptual signalling – making explicit the concepts underpinning tasks – the workbooks are not strong. On the other hand, the authors conclude that progression in the EHL workbooks is generally moderate to strong, but weaker in relation to writing activities.

Regarding Mathematics, Hoadley and Galant conclude that compared to the recommended coverage and weighting of the Grade 3 curriculum, a marginally greater proportion of coverage is spent on *Number, Operations and Relationships* (62% as opposed to the recommended 59%) and *Patterns, Functions and Algebra* (19% as opposed to recommended 10%) at the expense of the other three content areas. In particular, half the recommended proportion of coverage is spent on *Space and Shape* (6% as opposed to recommended 12%). Overall, conceptual signalling in the Mathematics workbooks is moderate: the content/concepts/skills/components underpinning most tasks are made explicit in headings and other cues, but instructions are not always clear and definitions and worked examples occur only occasionally. Progression in the Mathematics workbooks varies across the different content areas, but is strong in relation to the key content area of *Numbers, Operations and Relationships*.

Hoadley and Galant conclude that the workbooks represent effective curriculum practice tools, although the possibility of teachers using the workbooks to track the progress of learners and provide extra support where necessary is less likely. As assessment curriculum tools, the workbooks are limited in that evaluative criteria and conceptual signalling are often implicit (especially in Language); there are no representations of model answers, solutions or gauges of what a successful learner production looks like. At the system level, the workbooks could provide a *quantitative* measure of curriculum coverage, but in their current form would not provide any indication of the *quality* of learning and teaching; nor could they be used to assure this quality. Furthermore, while they present a relatively simple and quick way to measure curriculum coverage at a very basic level, the workbooks cannot provide a reliable indicator of learner progress over time.

Examining the possibility that they be trialled as the *sole* text given to teachers, Hoadley and Galant conclude that this is not a viable option, given the workbooks' limitations regarding conceptual signalling. In order to equip the workbooks to support quality teaching on their own, they would need further development to make the evaluative criteria and conceptual signalling in the text more explicit. This could be accomplished by strengthening the teacher notes, providing more comprehensive in-text notes, distributing an aligned teacher guide and/or using the workbook alongside a good textbook.

3.9.3 Node 3: Setting the learning goals

Node 3 of **Figure 2** is a key point in the curriculum cycle, where embodiments of the knowledge, skills and values (KSV) to be learnt are presented by means of assessment tasks. Four main types of assessment exercises serve different purposes: assessment for accountability, systemic evaluation, assessment for progression and certification and formative assessment. These are discussed below, together with the risks to validity and reliability inherent in using assessment data for these respective purposes.

Assessment for accountability, systemic evaluation and progression

Internationally, school assessment systems of the type represented by the ANA and NSC – centrally directed, periodic and universal in application – may be used to hold schools and higher levels of the system to account through pressure from administrators, parents and the public in general. Incentives and sanctions may be used to reward or punish schools, depending on the extent to which performance meets expectations. The *No Child Left Behind* programme in the United States is a prime example of a system used primarily for accountability purposes.

A second goal of large-scale testing systems is to measure the state of the school system, generally as part of a programme to improve performance. This purpose is often linked to the first, in which case a single set of tests serves both purposes. The annual *Western Cape Systemic Evaluation (WCSE)* tests administered in primary schools in the Western Cape provide an example of this combination. However, unlike *No Child Left Behind*, the *WCSE* is

a low stakes exercise, with no public reporting of results and no sanctions for poor performance, although it does attract additional attention from district and provincial support systems. Financial prizes are given to schools for improved performance. *No Child Left Behind*, on the other hand, has attracted widespread criticism (see for example, Ravitch, 2010), while, according to Townsend et al. (2013), demonstrating no conclusive evidence of systemic improvement after more than a decade of administration.

Where the first two goals – accountability and systemic evaluation – are not linked and the second stands alone, universal application is not necessary and the tests may be administered in a representative sample of schools. Examples of such systems include SACMEQ, the Progress in Reading Literacy Study (PIRLS) and TIMSS. South Africa participates in all three of these comparative exercises.

Large-scale assessment procedures which serve a third goal – progression and certification – are often associated with those directed towards one or both of the first two purposes. In South Africa, the NSC is the prime example of this kind of system. Evidence that the NSC serves all of the first three purposes of large-scale assessment systems is reflected in the fact that, in addition to providing school leavers with accreditation of various kinds, the NSC is widely considered by all stakeholders to provide the most reliable measure of systemic and school performance, while at the same time teachers, schools, districts, provinces and the DBE are held accountable for the results (although there are few consequences for poor performance). In addition, the NSC serves the fourth purpose of assessment, to improve pedagogy: thus, past examination papers are eagerly studied every year by teachers and learners and teaching methods and learning strategies adapted accordingly.

Formative assessment

This brings us to the assessment type popularly referred to as *assessment for learning,* following Black and Wiliam's (1998) classic formulation. There are many ways in which tests falling into this category may be used to assist teachers to improve their pedagogy, including signalling what is important in the curriculum and demonstrating the standards appropriate to the grade. Perhaps their most important function is to diagnose weaknesses in learner knowledge and hence in teaching and learning practices. This is insightful, particularly for teachers, but such tests also provide key information regarding the design of intervention programmes to address these weaknesses and to track progress in closing the gaps. For this reason we use the term *formative assessment* to emphasise the important role such tests play in shaping and directing pedagogy.

Formative assessment covers a range of activities, from the use of standardised tests, to micro-level on-going engagements between individual learners and the teacher and everything in between, including class tests, examinations, written exercises and oral quizzes. All are formative, in the sense that their primary purpose is to inform teachers and learners about learner mastery, misconceptions and learning strategies.

Section 4 of the CAPS documents for each subject in the respective phases is concerned with assessment and it is clear that formative assessment is seen as an important driver in the implementation of CAPS. For example, the statement for mathematics in the FET phase (DBE 2011b) describes the purpose of assessment as:

> *… a continuous planned process of identifying, gathering and interpreting information about the performance of learners, using various forms of assessment. It involves four steps: generating and collecting evidence of achievement; evaluating this evidence; recording the findings and using this information to understand and thereby assist the learner's development in order to improve the process of learning and teaching.*
>
> (DBE, 2011b: 68)

Formative assessment is a key pedagogical tool and the foregoing discussion therefore belongs more appropriately with the discussion on Pedagogy below (page 32). However, it is placed here because, in discussing the risk factors involved in the different types of assessment, it is instructive to compare the potential advantages of and dangers involved in formative assessment with those of the other assessment types.

Risk factors and their mitigation

Two factors stand out when considering sources of risk and their mitigation with respect to the first three assessment types (accountability, certification and systemic evaluation). The first potential danger involves standardisation of the instruments and procedures. In order to be comparable from one year to the next (vertically) and between schools in the same year (horizontally), rigorous psychometric techniques must be applied in the design and construction of the tests. In addition, whether the tests are administered by teachers or external agents, without very extensive training on use of the instruments, a wide variety of practices may be applied in administering and marking the tests, resulting in low reliability when comparing results. Under these circumstances, differences in scores between schools or rises and falls across time could be due to different administrators applying different standards and not to any differences in learning.

A second risk factor involved in ensuring the validity of data emanating from assessment exercises of any kind is the problem of cheating. When the stakes are increased by loading test results with consequences, the risk of cheating occurring rises proportionally. For example, Jacob and Levitt (2003) have shown that in Chicago public schools over the years 1993 to 2000, a very significant number of teachers read the answers out to their children when administering standardised tests, the results of which, in part, determined the teachers' salaries.

Assessment exercises used for formative purposes are very different to tests for accountability, systemic tracking or certification. The main source of this difference lies in the extent to which teachers and instructional leaders are involved in test construction, administration, scoring, analysis and reporting. For tests designed for accountability, systemic or certification purposes, risk minimisation dictates that educators should be excluded as far as possible from direct involvement in these processes. Since they have a vested interest in the results and since they may introduce idiosyncratic practices, teachers are not the best agents to administer the tests; this task is best performed by outsiders who are trained and monitored to produce standardised, highly reliable results. In contrast, achieving the aims of formative tests depends on the involvement of educators in all stages of the cycle. Through their participation in administering and scoring the tests, teachers and their managers gain direct experience of and insights into the performance of their learners, while involvement in test design and analysis of the results provides important opportunities for professional development in these key curriculum processes.

Annual National Assessment

Piloted in 2011 and rolled out across the country the following year, the ANA consists of tests written by some nine million learners annually in Grades 1 to 9 in the Languages and Mathematics. Union resistance (see SADTU, 2016) led to a suspension of the programme in 2016.

The DBE report on the 2013 iteration of the ANA (DBE, 2013) lists the purposes of the exercise as:

- Exposing teachers to best practices in assessment;
- Targeting interventions to schools that need them most;
- Giving schools the opportunity to pride themselves on their own performance; and
- Giving parents better information on the education of their children.

These goals are predominantly oriented towards formative purposes. However, in her introduction to the report, Minister Motshekga, in addition to listing the diagnostic value of the exercise, notes that ANA provides the DBE with a measure of systemic change (DBE, 2013). The Minister thus sees a systemic evaluation purpose to the ANA. This duality of purpose is apparent throughout the reports detailing the results of both the 2013 (DBE, 2013; 2014b) and 2014 (DBE, 2015d) ANAs. A review of the ANA, commissioned by the DBE and undertaken by the World Bank, points out a major difficulty in attempting to combine accountability with formative assessment: a perception by teachers that ANA is used by government as an accountability instrument by means of which their work is judged and by learners that the ANA is extremely high-stakes (World Bank, 2013). This is the most obvious example of how measures taken to maximise the diagnostic, formative uses of the ANA undermine its systemic evaluation potential. Encouragingly, the DBE has signalled its intention to include anchor items, although the disruption of the 2015 ANA has delayed this plan.

The systemic evaluation purposes of the ANA tests would prescribe strict comparability of the instruments across time. This is a condition which the DBE concedes is not met (DBE, 2015d). In light of this admission, the DBE's claim in the same report that results are improving and that the *Action Plan to 2019: Towards the realisation of schooling* 2030 goals are being met rests on shaky epistemological grounds.

Test design is not the only factor considered in rendering tests horizontally and vertically comparable. Rigorously standardised test administration, scoring and data capture are equally important. As noted above, using teachers to undertake these tasks promotes the diagnostic elements of the ANA, but severely compromises its systemic evaluation potential and increasing the stakes attached to the results accentuates this tension. Gustafsson (2014) detected a significant degree of cheating during the 2013 administration of the ANA, but concluded that these practices occurred in a limited number of schools, probably less than 10% nationally, and that they were particularly prevalent in three provinces, the Eastern Cape, Free State and KwaZulu-Natal, and particularly uncommon in the Western Cape.

Regarding data management, the reliability of the test results is brought into question by incomplete data capture. Following an analysis of the 2013 data, Gustafsson (2015) concludes that the great majority of districts did not display sufficient completeness of data collection to allow for meaningful district-level reports. For instance, at the Grade 3 level, and focussing on Language marks, only 29 of the 86 districts had at least 85% of learners' data captured. One manifestation of incomplete data capture may be high variability of results from one year to the next, thus rendering vertical comparison unreliable.

The primary purpose of formative assessment is to use the results to improve teaching and learning in the classroom, either directly by the teacher reflecting on her own practice and that of her peers or indirectly through in-service training programmes and other interventions designed to address issues identified by the assessment. The pedagogical culture which predominates in most South African schools is far from the formative assessment ideal: very little learner talk, particularly with respect to asking questions, inadequate frequency and quality of reading and writing and a lack of meaningful communication between teachers on issues of curriculum, pedagogy and assessment (see, for example, Hoadley, 2012). The DBE is attempting to promote more productive assessment practices through the formation of professional learning communities (PLCs) (DBE, 2015c), an idea first raised in the *Integrated Strategic Planning Framework for Teacher Education and Development in South Africa* (ISPFTESA) in 2011 (DBE/DHET, 2011).

Envisaging a key role for PLCs as mechanisms for pooling resources, especially intellectual, and driving the work of the school through educator teams working together has gained academic respectability in recent years. However, as Brodie (2013) notes, the key to the success of any PLC is the quality of its leadership: facilitators need skills and knowledge to design and implement appropriate activities for teachers and to bring in external knowledge

appropriately to help the community grow and learn (Brodie, 2013). Coe et al. (2014: 25) emphasise the point, describing how, in the absence of strong curriculum leadership, PLCs are likely to degenerate into a situation of 'the blind leading the blind'.

Current developments in assessment

Following the suspension of the ANA in 2016 and fuelled by criticism of assessment overload with respect to CAPS (see for example, Goetze, 2017), debates in the assessment space have been gathering momentum. The *Mathematics Indaba* hosted by the DBE at the end of 2016 provided a focal point for a number of ideas which have been gaining traction among educators in the past year or two. One of the themes of this discussion was that more emphasis should be placed on strengthening classroom assessment, with strong support from school leadership and capacity building of practitioners, in order to promote the alignment between teaching, learning and assessment (Chetty, 2016a).

There is increasing talk in policy circles of a three-pronged approach to assessment, as captured in Chetty's proposed assessment framework (Chetty, 2016a). First, regarding *systemic evaluation* (SE), there is a proposal to implement a 3-year, sample-based strand that will be used to monitor learner trends and report on the quality of learning outcomes across the system; this will be independently administered and allow for international benchmarking and trend analysis across years, with built-in confidential anchor items and questionnaires.

The second strand in Chetty's framework is an *annual summative examination*, conducted at the end of the school year in selected subjects and grades, that will form part of the promotion of learners. Such a move would address two criticisms of the ANA: that it is a duplication of SBA and an added burden to schools; and that since it doesn't count for anything, it is not taken seriously by learners. However, at the same time, such a move would raise the stakes attached to this external assessment exercise and thus increase the pressures on schools to improve their scores, by fair means or foul. The Minister has declared her intention to use a re-designed external assessment exercise at the GET level for accountability purposes, so that all stakeholders are held responsible for the quality of learning outcomes produced and at least one measure of performance is available for every school (Motshekga, 2016b).

Currently, a large and growing research literature on using value-add measures (VAMs) to measure the performance of teachers and schools indicates that serious theoretical and practical difficulties involved in this enterprise are complex and far from resolved. Thus, the statement by the American Educational Research Association (AERA) specifies that such measures need to satisfy eight technical criteria in order to render reliable judgements (AERA, 2015). South Africa would do well to study these lessons carefully before embarking on a large scale rollout which is unlikely to achieve its aims if not designed, administered and reported very carefully. Using test scores for school accountability is a fraught exercise, as evidenced by the USA moving away from *No Child Left Behind* in favour of a decentralised approach to systemic assessment and school accountability[4], where states and districts have discretion both in the tests used and their method of administration.

Nonetheless, as the NSC examination system shows, mounting a national system of testing for progression purposes and school accountability will require high levels of security and external quality assurance during administration and marking, all of which add significantly to the cost of such an exercise. The (uncertain) benefits to be derived should be carefully weighed against this cost.

[4] *No Child Left Behind* has been replaced by *Every Student Succeeds*, where the *Every Student Succeeds Act (ESSA)* requires that state legislatures develop accountability plans which, among other things, reflect 'meaningful' consultations between state education agencies and their state legislatures (Burnette, 2017).

The third element of Chetty's assessment framework is a set of *diagnostic tools for teachers*, directed towards improving formative assessment practices at classroom and school levels. It is proposed that administration, marking, capture and reporting be done at school level, with no aggregation of learner scores beyond the school. Formative assessment is seen as a means to align teaching and learning with the specifications of the curriculum and to coordinate the work of instructional leaders with that of teachers. Formative assessment is increasingly viewed as a priority activity for drawing teachers and instructional leaders together in PLCs (Sapire, 2016).

There are two main threats to the achievement of these goals. First is the question of educator capacity. According to Moloi (2016), the educator competencies required to exercise formative assessment effectively include good content knowledge, pedagogical knowledge and sound assessment skills. Chetty (2016b) elaborates the last of these, emphasising that conducting an error analysis for diagnostic purposes requires educators to understand the different cognitive skills that are to be assessed, as well as the differences between successive levels of difficulty. Yet a number of studies (Hoadley, 2012; NEEDU, 2013; 2014) indicate that formative assessment skills are lacking in many teachers and instructional leaders. One of the greatest challenges to achieving the formative ideals of CAPS is therefore to find ways to develop the capacities of educators in using assessment to sharpen pedagogy.

A second threat to the effective use of formative assessments is an over-emphasis on assessment for accountability, which tends to dominate at the expense of the use of assessment processes to improve teaching and learning. It has been argued above that this has been a significant weakness of the ANA and the subject of teacher objections to the tests (SADTU, 2016).

3.9.4 Nodes 4 and 5: Educator capacity

Nodes 4 and 5 in **Figure 2** are about teacher education, both ITE and in-service, or CPD. Two issues regarding the role of content and pedagogical content knowledge in promoting effective pedagogy are pertinent to this discussion. First, Deborah Ball and her colleagues make the self-evident argument that teachers cannot help children learn things they themselves do not understand (Ball, Hill and Bass, 2005). Coe et al. (2014) support this assertion with evidence from the literature, noting that the most effective teachers have deep knowledge of the subjects they teach and that when teachers' knowledge falls below a certain level, it is a significant impediment to students' learning.

A second issue drawn from the literature review notes that while many studies have failed to find a strong relationship between moderate levels of teacher knowledge and student learning, the work of Heather Hill and her colleagues (Hill, Rowan and Ball, 2005; Hill et al., 2008) suggests that a very firm understanding of the principles underlying any mathematical topic are required before teachers are able to effectively bring *pedagogical content knowledge* (PCK) (Shulman, 1986) to bear on student misconceptions. Elaborating this idea, Hill and her colleagues use the term *content knowledge for teaching Mathematics (CKT-M)* (Hill et al., 2005; Hill et al., 2008), which is defined as the specialised knowledge of Mathematics needed for the work of teaching. Hill et al. (2005) found that CKT-M is the strongest teacher-level predictor of student learning gains, exhibiting more of an effect than teacher background variables and average time spent on Mathematics instruction each day.

The final point to emerge from the literature review conducted for the present evaluation is to emphasise that the content knowledge of the majority of South African teachers in Mathematics and English is very low, both at primary (Taylor and Taylor, 2013; Venkat and Spaull, 2015) and high school levels (Bansilal, 2015).

Three measures are at the disposal of policy makers to address these capacity constraints. First, strengthen recruitment and promotion procedures using expertise as the primary criterion for appointments, at the same time adopting more objective selection techniques.

Second, ensure that the large but largely ineffective CPD (or in-service education and training, also known as INSET) system (discussed below) is placed on a scientific, evidence-based trajectory through allocating adequate resources for evaluation, research and development and acting on research results. Third, promote measures to improve the quality of ITE by paying attention to the size, shape and substance of pre-service education and training. We examine these three issues in reverse order, beginning with ITE.

Initial Teacher Education

The foundations of professional expertise and attitude are built during pre-service training. In the field of education, the ITE sector underwent radical reorganisation in the early- and mid-2000s as a result of general dissatisfaction with the quality of teacher training under the college system. The quality of ITE programmes and their relevance to meeting the needs of the school system have come under close scrutiny over the last decade.

Shortly after reorganisation of the sector, the Higher Education Quality Council (HEQC) conducted a review of qualifications in education which was published in 2010. The findings of the review were discouraging. Across all four types of programmes reviewed – MEd, BEd, PGCE and ACE – fewer than half (48%) received full accreditation, with 22% either not accredited at all or 'On Notice of Withdrawal' and the remainder being conditionally accredited (CHE, 2010). The review described a lack of consensus within the ITE field in South Africa around teaching practice: this was tightly regulated in some institutions, while in others it was relatively unstructured; and few institutions could articulate the attributes they sought to develop in their students through work-based learning.

Since the HEQC evaluation, the sector has seen a *National Teacher Education Summit*, the publication of the ISPFTESA (DBE/DHET, 2011) and the promulgation of two iterations of the *Minimum Requirements for Teacher Education Qualifications* (MRTEQ) (DHET, 2011; 2015). As is the case with the evolution of the school curriculum since 1994, these developments collectively exhibit a drive towards more precise content specification.

How is the ITE sector heeding the sharp criticism of the HEQC review and to what extent are current programmes meeting the needs of the school system? One item of good news in this regard is that when the SACMEQ teacher test results that measure teacher subject knowledge are disaggregated by age, teachers in the category 19 to 29 outperform their older colleagues by some margin; furthermore, teachers in this age cohort are better able to increase the mean performance of students (Armstrong, 2015). Most encouragingly, Gustafsson (2016c ; 2017) has shown that this was not a one-off phenomenon confined to the 2007 SACMEQ results, but was confirmed in the 2013 iteration, in which younger teachers performed substantially better than older teachers; furthermore, in 2013, younger teachers in South Africa, whilst still falling short of the SACMEQ 'champions', namely Kenya's teachers, were performing at about the level of the second-best group of teachers in SACMEQ (Zimbabwe) and the third-best group (Uganda).

Although younger teachers exiting the universities may know their subjects better than their older peers educated in the colleges, this does not necessarily mean that they should not know a lot more. To illustrate the argument, results from the Initial Teacher Education Research Project (ITERP) study give cause for concern, showing fundamental gaps in EFAL and Mathematics on the part of newly graduated teachers responsible for the IP (Bowie, 2014; Deacon, 2016; Reed, 2014). These analyses indicate that current ITE programmes are failing to adequately equip new teachers for the demands of the school system in a number of important ways, including inadequate attention to the teaching of reading (Reed, 2014) and elementary arithmetic instruction (Bowie, 2014). These challenges are being taken up by the Department of Higher Education and Training (DHET) and the DBE in collaboration with the ITE sector through the Primary Teacher Education Project (PrimTEd) aimed at developing BEd curricula for primary school teachers which better meet the needs of schools (DHET,

2016). In the meantime, poor teacher capacity must place a fundamental restriction on the implementation of any school curriculum, however good the design and supporting materials may be.

Continuing professional development

Very significant sums are spent annually on teacher development programmes offered by both government and the private sector, with an increasing number involving public/private partnerships. For example, in 2014, government budgeted R1.1 billion for CPD; while only 43% was actually spent, this represents a considerable investment (DBE, 2015a).

While the scale of donor support to this sector has declined somewhat since the heyday of international donor aid to the country in the 1990s and 2000s, INSET activity supported by both international and local corporate agencies remains robust. A recent survey estimated corporate social investment (CSI) in South Africa at R8.1 billion in 2014/2015 (Trialogue, 2015: 38). Education received 47% of all CSI expenditure – an estimated R3.8 billion (Trialogue, 2015: 43). CSI expenditure on education spans a wide range of programmes. In 2014/15, the three largest of these were bursaries, scholarships and university chairs (24% of total spending); infrastructure, facilities and equipment (a further 24%); and teacher development (18%). The last figure indicates that CSI spending on CPD, at an estimated R680m, exceeds the R430m spent by government.

Reporting on public sector CPD activity, the DBE exhorts PEDs to utilise the total amount of their skills development budget, report consistently, accurately and on time on their spending trends and numbers of educators trained and comply with the provisions of the various laws and regulations in order to improve service delivery (DBE, 2015c). The report further recommends that the DBE undertake regular studies to investigate the efficiency of resource utilisation, given the wide variance in training expenditure across PEDs. Finally, the report notes that it is not possible to discern from the data, with any degree of certainty, whether and to what extent PEDs are addressing the challenges of low educator capacity.

The last point signals a telling gap in the CPD terrain: although very significant sums are spent annually on CPD, involving thousands of educators and person hours, little is known about the quality of this activity and the extent to which it is meeting its objectives. Without understanding the effects of intervention programmes, we run the danger of simply repeating the same mistakes over and over. Considering the unspent funds in government's INSET budget, there cannot be an argument that no money exists for programme evaluation. Just five percent of the training budget would amount to R50 million, which could very fruitfully be used for assessing project implementation, impact and the mechanisms of change. This investment is likely to leverage savings in terms of money spent on more effective programmes and the elimination of those that serve no purpose other than to waste the time of participants and the hard-earned rand of the South African taxpayer.

Making the most of existing capacity

One of the three priorities of the National Development Plan (NDP), *Our future - make it work: National development plan 2030* (along with raising employment through faster economic growth and improving the quality of education, skills development and innovation), is the need to build the capability of the state to play a developmental, transformative role (NPC, 2012). As the largest single government sector, the education system is an obvious area of focus in building the capable state envisaged by the NDP. The foregoing discussion indicates that a key lever in this enterprise must be to improve the quality of instructional leadership through the appointment of the best teachers to positions of leadership at all levels. In this regard, two of the critical actions identified by the NDP as essential to achieving its goals are professionalising the public service and establishing an education accountability chain, with lines of responsibility clearly defined from state to classroom.

The NDP goes on to emphasise the importance of policy continuity and coherence in attempting to improve the quality of education; this will require careful management, support from all interested parties and perseverance over time. Research evidence is cited by the NDP from reform initiatives around the world to indicate that sound approaches to public sector reform only begin to produce results some six years after they are initiated, with sustained dividends emerging over the long-term. Thus, a degree of policy consistency is required that straddles changes in leadership in government, business and labour, since many aspects of the plan will require years of effort to deliver results.

The NDP asserts that any plan is only as credible as its delivery mechanism is viable and that there is a real risk that South Africa's developmental agenda could fail because the state is incapable of implementing it. In this regard, a capable state does not materialise by decree, nor can it be legislated or waved into existence by declarations. It has to be built, brick by brick, institution by institution, and sustained and rejuvenated over time. It requires leadership, sound policies, skilled managers and workers, clear lines of accountability, appropriate systems and consistent and fair application of rules.

The NDP singles out principals as key to institution building, recommending that they should be selected purely on merit, be given greater powers over school management and be held accountable for performance. This is a theme that the DBE has begun to pick up through the publication of the *Policy on the South African Standard for Principalship* (DBE, 2016a) and committing to the use of objective, merit-based criteria in the appointment of principals. Thus, in a press release following the presentation of the '*Jobs for Cash*' Report to Parliament in November 2016, the DBE laid out the introduction of a competency assessment process for principals to ensure those who are appointed to districts and provincial offices demonstrate their capacity to carry out the jobs for which they have applied (DBE, 2016b); towards this end, the DBE is working with the DHET, the South African Council for Educators (SACE), the Education Deans Forum (EDF) and other stakeholders on the development of a professional standards framework for teachers.

The application of competency tests for shortlisted candidates for principal posts has been piloted in Gauteng and been in use in the Western Cape for three years; anecdotal evidence indicates that in the Western Cape the system is gaining traction with School Governing Bodies and procedures are being piloted at the level of HOD appointments (NEEDU, 2014). Currently, these considerations are conspicuous by their absence: in the promotion of staff to key positions seniority is generally a major criterion (NEEDU, 2013; 2014), with rampant nepotism and corruption apparently dominating parts of the system (Motshekga, 2015; DBE, 2016c).

Staff promotion practices which do not prioritise expertise, such as those which dominate most provinces at present, cannot hope to build an excellent school system. Such practices have two corrosive effects. First, they do not make the best use of expertise currently in the system, wasting a great deal of potential. Second, there would be little motivation for a young teacher to develop and take pride in her expertise: she would be better rewarded by cultivating relationships with controlling cabals. This must cause a great deal of frustration for honest teachers who want to make every effort to develop their own knowledge and skills and removes incentives for teachers to take responsibility for their own capacity development.

3.9.5 Node 6a: Instructional leadership

Node 6a in Figure 2 is about curriculum management or instructional leadership, which refers to the ensemble of processes operating at the different levels of schooling and directed towards optimising teaching and learning. The name signals that all the processes of schooling are directed to one principal end, namely classroom instruction. In addition to managing time and resources, these processes include identifying areas of weakness for both learners and teachers and devising intervention programmes to address these. Instructional leaders also

monitor the pace and progress of learning, ensuring learning activities are set at the right level of complexity for each grade and that learners are stimulated to achieve their full potential.

Research efforts to identify the mix of leadership qualities and systems which bring out the best in schools have not been an unqualified success (Taylor, Gamble et al., 2013). Case study research, on the other hand, seems better suited to understanding the complex school environment with its myriad influences and distractions and has proved to be most popular among South African scholars active in this field (Christie, 2001; Christie et al., 2007; Hoadley and Galant, 2015b; Malcolm et al., 2000; Taylor, van der Berg and Mabogoane, 2013).

Elmore is emphatic in underlining the importance of capacity development, declaring that schools cannot improve performance without a substantial investment in human capital aimed at developing 'the practice of school improvement' (Elmore, 2003; 2008). What Elmore means by this phrase entails the creation of a learning culture within the school, led by the principal and senior staff. Ideally, this would take a similar form to what has become standard practice in the medical profession, where daily ward rounds of medical interns, residents and supervising or attending physicians visit patients, observe and discuss the evidence for diagnoses and, after a thorough analysis of the evidence, discuss possible treatments. City et al propose instituting such practices in schools, where they could be called 'instructional rounds', borrowing from the medical practice of daily ward rounds: central to this idea is shared practice, characterised by educators in schools collaborating around protocols and routines (City et al., 2009). Clearly, this is another way of describing the DBE's idea of PLCs.

A significant step forward in understanding how these ideals may be put into practice has been achieved by the SPADE study[5], a matched-pairs and matched-triplets case study investigation of leadership and pedagogy conducted in the Western Cape. The study matched nine high-performing with five underperforming primary schools serving poor communities (Hoadley and Galant, 2015b). Starting from the axiom that the function of the school is to transmit specialised knowledge, it follows that certain organisational configurations will optimise learning outcomes. From this perspective, three school 'types' are recognisable: 'epistemic', 'bureaucratic' and 'communitarian', whose characteristics are summarised in **Table 8**.

Table 8: Three school types, based on internal organisational features

Internal school organisation	School type		
	Epistemic	Bureaucratic	Communitarian
Division of labour	Leadership roles clearly defined and responsibilities allocated to members of the School Management Team (SMT) and other staff and parents.	Leadership 'goes through the motions' of monitoring and support, but this is largely superficial and focused on formal compliance rather than substantive engagement.	Sharing of roles; similar to bureaucratic.

[5] Schools Performing Above Demographic Expectations (SPADE) Project of the Centre for Social Science Research at the University of Cape Town.

Internal school organisation	School type		
	Epistemic	**Bureaucratic**	**Communitarian**
Basis of authority	Management recruits their specialised knowledge and experience regarding pedagogy, curriculum and evaluation to establish their authority in the school.	Management bases their authority on the position they hold.	Authority established in terms of obligations and responsibility to the larger school community.
Forms of solidarity	Staff coheres around a professional ethic of responsibility for teaching and learning; everyone understands their professional, specialised roles and functions.	Consensus is based around everyone as a functionary of the state; everyone is concerned with 'getting the job done'; 'doing what they are supposed to do' or being proficient in administrative techniques.	Consensus is based on collective responsibility for wellbeing of the school and each other, the learners and the school community.
Instructional order	School leaders have an in-depth and extensive understanding of what is required instructionally and drive a programme of instruction, monitoring and support with strong staff development that focuses on curriculum.	Principals regard themselves more as administrators or financial managers or focus on human resource management and the school-community relations.	

Source: Constructed from Hoadley and Galant, 2015b

In most of the schools studied by SPADE, even some of the better performing ones, most principals functioned more as 'managers' than instructional leaders. However, in two of the highest performing schools, authority is characterised as 'epistemic'. All schools in the SPADE study were found to have at least some functioning structures and strategies around monitoring, time management, planning and strategic action and were characterised by regular planning meetings, afternoon classes, collection of learner books and moderation of tests. However, distinct differences in the quality of such activities lay in the extent to which these processes had instructional substance and/or consequence.

These findings accord with the conclusions of NEEDU researchers who, in 2014, visited 93 rural and urban high schools spread across the provinces (NEEDU, forthcoming). The allocation of leadership responsibilities emerged as the strongest of the four practices, although only 41 % of the schools in the sample demonstrated strong practice in this area. Monitoring teaching and learning – the crux of instructional leadership – was especially weak, with more than a third (36%) of the schools exhibiting weak or non-existent practices and only a small minority (16%) demonstrating strong, substantive routines.

An obvious implication of this research is that instructional leaders will only be in a position to create what Hoadley and Galant term an 'epistemic' climate in the school if they are themselves highly expert in matters of curriculum and instruction. This, in turn, has strong implications for the criteria and procedures used to identify, promote and develop effective instructional leaders throughout the system, an issue discussed in the previous section.

But a more fundamental blockage to curriculum implementation – poor use of time – must be addressed before effective leadership of the curriculum programme of the school can be instituted. Institutional dysfunctionality, of which poor time management is the most obvious manifestation, is a long-standing problem in the school system, first expressed publicly by then President Mbeki (Mbeki, 1998) in his address to the annual congress of the South African Democratic Teachers Union (SADTU) in 1998 when he said that it is unacceptable for teachers to persistently come late to school or leave early. This is a mantra which has since been repeated a number of times by politicians and senior public sector officials, including President Zuma in his inaugural State of the Nation Address in 2009. Declaring education a 'key priority' (Zuma, 2009), he went on to say that it is non-negotiable that teachers be "in school, in class, on time, teaching, with no neglect of duty and no abuse of pupils". More recently, both the President and Minister repeated calls for educator accountability at the *Education Lekgotla* in January 2017.

3.9.6 Node 6b: Pedagogy

Node 6b in Figure 2 represents classroom teaching and learning. Despite the best intentions motivating institutional, systemic and community support systems, the quality of daily learning is heavily dependent on the individual teacher, her expertise, attitudes and personality. SAs, few in number, with responsibility for many schools, cannot engage with individual teachers more than once or twice a year. The role of school level leaders is to create school conditions favourable to learning: predictable routines; order; high academic expectations; and an environment in which children feel nurtured and teachers feel valued. Nevertheless, for the largest part of every school day, the overwhelming academic influences on the child are provided by the child's teachers in a closed classroom environment.

The assessment of classroom teaching and the attempt to distinguish elements of good teaching from bad has, for three or four decades, been one of the most heavily researched topics in the school sector. Yet it is a topic about which we know very little with any certainty. Part of the reason for this lack of unambiguous findings is not so much the large number of possible variables present in the pedagogic encounter, although that itself is a major factor, but the fact that one unique combination of teacher and learner activities may be just as effective or ineffective as any number of quite different ensembles. From this perspective, the challenge to research is that the assessors required to distinguish different types of classroom behaviour need to be highly expert teachers, greatly experienced at working with a variety of classes in the subject and at the school level at which the observation occurs.

In searching for an appropriate set of indicators for undertaking the classroom observations for the present evaluation, the findings of the exhaustive review undertaken by Coe and his colleagues seemed most suitable, based as it is on a definition of effective teaching as that which leads to improved student achievement using outcomes that matter to their future success (Coe et al., 2014). Sifting through the literature from this perspective, Coe et al. identified six characteristics of 'great teaching', summarised in **Table 9**.

Table 9: Six characteristics of 'great teaching' and evidence for their impact on student outcomes

Evidence of impact on student outcomes		
Strong	**Moderate**	**Some**
(Pedagogical) content knowledge	**Classroom climate**	**Teacher beliefs**

Evidence of impact on student outcomes		
Strong	**Moderate**	**Some**
• possess deep knowledge of the subjects they teach; • be able to evaluate the thinking behind students' own methods; • be able to identify students' common misconceptions. When teachers' knowledge falls below a certain level, it is a significant impediment to students' learning.	• quality of interactions between teachers and students; • teacher expectations; • recognising students' self-worth; • valuing resilience to failure (grit).	• why teachers adopt particular practices; • the purposes they aim to achieve; • their theories about what learning is and how it happens.
Quality of instruction • effective questioning, use of assessment ; • reviewing previous learning; • providing model responses; • giving adequate time for practice; • progressively introducing new learning.	**Classroom management** • make efficient use of lesson time, • coordinate classroom resources and space, • manage students' behavior. These environmental factors are necessary for good learning, rather than its direct components	**Professional behaviours** • reflecting on and developing professional practice; • participation in professional development; • supporting colleagues; • communicating with parents.

Source: Constructed from Coe et al., 2014: 2-3

The Coe survey paid particular attention to teachers' content knowledge and PCK. The researchers quote Hill et al. (2005), who investigated the importance of teachers' PCK in Mathematics and found that the difference between high- and low-scoring (a 2 standard deviations gap) teachers on their Content Knowledge for Teaching (CKT) assessment was associated with more than a month's additional learning for students in a year. The survey notes that although this is not a huge effect, it is of a similar order to the strength of the relationship between socioeconomic background and attainment, for example.

3.9.7 Node 7: Learner attainment

While Node 3 in Figure 2 indicates the learning targets set by the curriculum, Node 7 serves a different function in that it assesses the extent to which the target KSV have been acquired by learners. Putting Nodes 3 and 7 together, assessment serves a communicative function in the curriculum process: it explicates the standards for teachers and learners alike, informs teachers, learners and parents about the progress of instruction and alerts policy makers to presences and gaps in the system. In grappling with assessment tasks, the learner gets to understand the kinds of information and arguments which constitute the discipline under study. Assessment provides the mechanism for the upward and downward flow of information on learning the intended curriculum. It links the activities of various actors operating in Nodes 1-6 and directs them towards the improvement of teaching and learning.

The most objective indicators of learner attainment are those provided by international comparative exercises such PIRLS, SACMEQ and TIMSS. In this regard, good news has begun to emerge on a number of fronts, indicating a slow but steady improvement across the South African system. For example, scores from the 2011 iteration of TIMSS indicate that South African Grade 10 learners exhibited a very marked rise in performance between 2002

and 2011 in Grade 8 and 9 Mathematics and Science: after no improvement across the 1995, 1999 and 2002 iterations, South African learners moved from a mean score of 285 in 2002 to 352 in 2011 in Mathematics and from 268 to 332 in Science (Reddy et al., 2015). Reddy et al. note that although these changes represent very significant improvements, the country still lags behind other countries at a similar stage of development.

Most encouragingly, the gains shown in the 2011 TIMSS were consolidated in 2015. Overall, between 2003 and 2015 the country has shown the biggest positive improvement of all participating countries in both Mathematics (by 90 points) and Science (by 87 points), which, according to Reddy et al. (2016), is equivalent to an improvement in achievement by two grade levels.

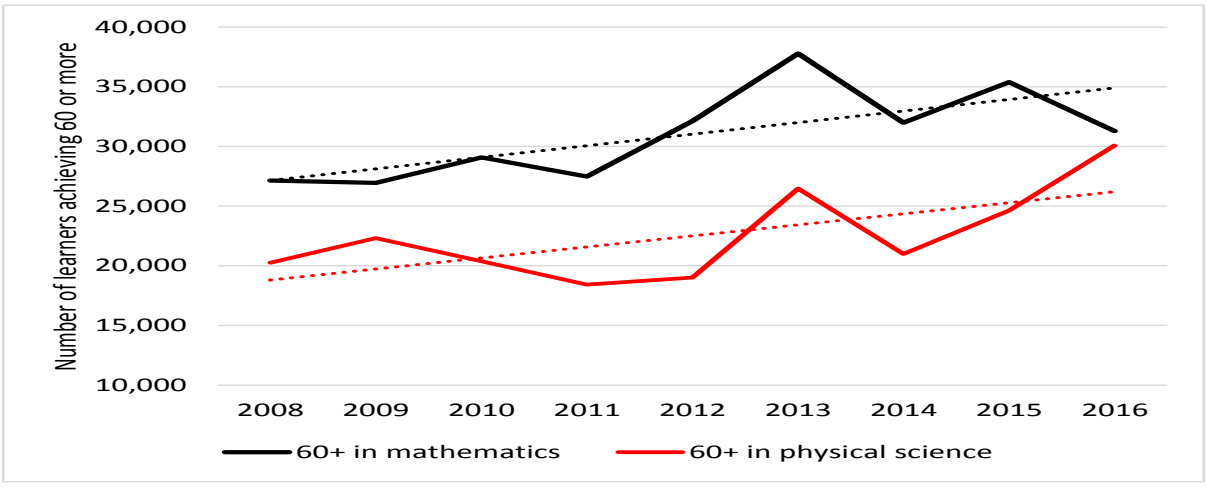
When the achievement scores are broken down by school type, the patterns reveal vast inequalities: approximately 80% of learners attending independent schools, 60% of learners at public fee-paying schools and 20% of learners at public no-fee schools achieved Mathematics scores above the minimum level of competency. The good news in this regard is that there has been a decrease in provincial inequalities, with the lower performing provinces demonstrating the biggest improvements in achievement.

Gustafsson (2016b; 2017) notes that these gains represent a very substantial improvement, being roughly twice the improvement rate of Brazil. Brazil is cited by many as the most remarkable improver in recent years on the strength of increasing its Programme for International Student Assessment (PISA) average score by 0.04 standard deviations a year between 2003 and 2012. In contrast, South Africa's improvement in TIMSS between 2002 and 2015 has been 0.08 standard deviations a year, meaning improvement at a speed roughly double that of Brazil. In Gustafsson's estimate, this rate represents a ceiling, or 'speed limit', on what is possible in any large public system.

The latest SACMEQ scores are somewhat more controversial, with the DBE announcing a very marked improvement between 2007 and 2013 (DBE, 2016d). These figures have been challenged (Spaull, 2016), although it would appear that, even by the most conservative estimates, the scores do exhibit a significant rise in both Literacy and Mathematics at Grade 6 level (Gustafsson, 2016a).

At the top end of the FET Phase, Gustafsson (2017) has also detected a rise in high level Mathematics and Science results in the NSC. Thus, the number of 'high-level' Mathematics achievers (scoring 60% and over in the NSC examination) increased by 29% from 2008-2016. For black African learners, the increase was 74% (**Figure 3**).

Figure 3: 2008 to 2016 Grade 12 Mathematics and Science trends



Source: Gustafsson, 2017

3.9.8 Conclusion: key lessons from the literature review

The evidence is unequivocal that, across a broad front, the South African school system is gaining ground in terms of improved quality. These encouraging signs notwithstanding, the Minister cautions against complacency (Motshekga, 2016a). She points out that Goals 1 to 3 of the *Action Plan to 2019: Towards the realisation of schooling 2030,* to increase the number of learners in Grades 3, 6 and 9 who have mastered the minimum Language and Numeracy competencies for their respective grades, have not been met. She attributes this 'dismal failure' to learners' inability to master elementary mathematical concepts and to the fact that the majority of learners do not have grade appropriate reading skills.

There is wide dissatisfaction with performance of the system, particularly in schools serving the poor. It is the task of this implementation evaluation to understand the factors inhibiting faster improvement and a faster reduction in inequality. The fact that the evaluation is directed towards the *implementation* of the curriculum constrains the search for answers to the research questions to be focused more closely on certain parts of the set of processes comprising the TOC and less closely on others. Thus, regarding curriculum design **(Node 1)**, the present evaluation does not undertake its own analysis, but notes the conclusions of the exhaustive Umalusi study that CAPS largely achieves the recommendations of Minister Motshekga's review undertaken in 2009. Nevertheless, the Umalusi evaluation strongly recommends that the DBE look carefully at the EHL, EFAL and Mathematics curricula at FET level. In particular, the following should be considered: providing more guidance for teachers on the selection of appropriate texts at different levels of cognitive depth (EHL); reducing the breadth of content and increasing depth (EFAL); and reducing the number of topics (Mathematics).

The present evaluation did not examine the structure of CAPS, but tested some of Umalusi's conclusions with teachers and their instructional leaders in districts, provinces and the DBE. For example, the evaluation asked educators to what extent they found CAPS easy to understand, whether they found it too long and if so, how the number of topics could be reduced, where they required further guidance, etc.

Regarding materials **(Node 2)**, the research evidence indicates that book supplies to South African schools have increased significantly in recent years. In particular, the DBE workbook programme has proved to be a success regarding the production and delivery of books to schools and classrooms. The present evaluation paid particular attention to the kinds of books actually utilised in lessons and to the ways in which they are used.

A number of important issues arise from local and international experience in the field of setting and measuring the learning targets **(Node 3)** expected by the curriculum. It is clear from the literature that assessment has the potential to provide teachers with a powerful mechanism for linking the goals of the curriculum with everyday classroom activities. Assessment can also provide instructional leaders with the tools to engage with the work of teachers, assess pedagogical needs and create professional development opportunities within the schools. CAPS recognises the potential of formative assessment in particular to achieve these ends. A major focus of the present evaluation was to investigate the extent to which formative assessment is being practiced at district, school and classroom levels and to consult educators on how the intensity and effects of such practices may be enhanced.

A major challenge to policy makers with regard to assessment is to balance the high level need for data on systemic progress and school accountability with the need to grow the capacities of educators to use formative assessment to improve pedagogic quality in schools and classrooms. However, assessment for accountability has not been a success in the United States, after nearly 15 years of the *No Child Left Behind* programme. Venturing into this territory thus requires paying careful heed to lessons from elsewhere and a cautious piloting before embarking on a major programme.

On the issue of systemic evaluation, the question is whether a new initiative launched by government would add any information that is not already provided by the numerous international comparative programmes in which South Africa participates. The establishment of a valid and reliable home-grown systemic evaluation exercise would require the mobilisation of considerable technical expertise. If managed with due care to the highest ethical and scientific standards, it would still take at least three years to gain the trust of both the scientific community and the general public. The experience of the ANA bears ample testimony to what can go wrong, should international lessons not be followed.

With respect to educator capacity **(Nodes 4 and 5),** evidence from the SACMEQ teacher tests indicate that younger teachers are considerably more knowledgeable than their older peers and that these higher levels of teacher knowledge are translating into improved learner scores. However, here too there is no room for complacency: direct research into current ITE programmes indicates a high variability in quality across the system and a general trend of newly graduated teachers being inadequately equipped for the challenges of South African schools. Although the present evaluation conducted no original investigation into the terrain of ITE, it is an important factor to bear in mind when considering the influences that impact the implementation of CAPS, since the failure to equip teachers with the necessary foundation skills during their initial training may have irrevocable consequences throughout their working lives.

On the question of in-service training, there is a widespread feeling that the considerable resources spent on programmes for educators are not achieving impact in terms of increasing capacity, let alone resulting in more effective pedagogy. While evaluations of such programmes are becoming more common, the large majority continue to be driven more by faith than science and, if progress is to be made in improving the traction achieved by CPD initiatives, then a research-focused approach needs to be adopted. The present evaluation paid particular heed to the experience of educators with CPD, with special reference to CAPS training, but also casting the net wider in an attempt to understand current practices and needs of teachers and instructional leaders.

Finally, with respect to educator capacity, it is clear that the system is not making the most of existing expertise, with recruitment and promotion policies subject to manipulation and corruption. Curriculum implementation is an expert task, requiring high levels of skill in subject knowledge, PCK and practical classroom expertise. These considerations underline the need to appoint educators with the strongest knowledge resources and track records of effective teaching into positions of instructional leadership at all levels of the system, commencing with school-level HODs. The evaluation probed attitudes towards promotion practices commonly employed in schools and higher levels of the system to better understand their effects on curriculum implementation.

Node 6a is in the terrain of instructional leadership. This is where the 'epistemic' principal (see Table 8), supported by her deputy and HODs, leads an on-going cycle of quality assurance, analysis of test scores, diagnosis and staff development, all aimed at pooling educator resources to improve teaching and learning. Evidence indicates that this function is not currently being performed with any degree of expertise in a large proportion of schools and requires extensive support mounted by district, provincial and national levels. The quality and nature of instructional leadership in schools and districts was a major focus of the evaluation, directed towards understanding how such practices can be improved. The work of Hoadley and Galant (2015b) was instrumental in shaping this investigation.

The purpose of **Nodes 1 - 6a** is to collectively equip and support teachers to exercise effective pedagogy **(Node 6b)** and the evaluation spent a significant amount of effort observing teachers in class, talking to them about CAPS and its implementation and examining their documentation regarding planning and assessment**.** The work of Coe et al (2014) in

establishing classroom level factors most strongly associated with improved learning was used to develop indicators and sources of evidence for this aspect of the evaluation.

On the question of learner attainment **(Node 7),** a key question presents itself: has the system reached the maximum rate of improvement, the highest in the world according to Gustafsson (2016b) or is further acceleration possible? Should we be content with steady incremental gains over a period of many decades before the level of performance begins to reflect the level of resource allocation? Or are there levers which, if applied appropriately, will catapult the system into higher quantum levels of performance within a decade or two? It is the ultimate purpose of this evaluation to illuminate these questions.

4 FINDINGS

The evaluation findings are discussed under the questions listed in section 2 above. In this process, the relevant data across the instruments is integrated to compose three dimensional responses to the respective questions. As discussed in 3.2 above, sub-questions 1.1 - 1.16 were clustered into six themes. In the discussion in this section, a description of the data under each theme, or cluster of sub-questions, is followed by a conclusion which answers the question(s) posed.

4.1 Question 1

4.1.1 Planning and Coverage

Sub-questions 1.1 – 1.3, 1.5 and **1.11** all relate to curriculum planning at district, school and classroom levels and to curriculum coverage by teachers.

Q1.1: Do districts plan monitoring and support according to CAPS pacing specifications?

By August, two of the four districts had not collated their district-level plans into a single document, although in the case of District B, senior curriculum officials had a clear, evidence-based strategy, resulting in many activities planned in great detail. Districts C and D had plans which were detailed and practical and based on an analysis of learner performance; they could be said to conform to CAPS requirements.

District A's plans were rudimentary in the extreme and quite unsuitable for guiding systematic monitoring and support services to schools. District A encompasses some of the most rural and underdeveloped parts of the country and it is perhaps not surprising that officials in the district office are less competent than their peers in the other districts, given that the latter live in urban areas with greater access to educational opportunities and stimulating cultural activities and hear and speak English more frequently. However, it was also noticeable on visiting District A that while the streets are untarred and garbage litters the gutters, it is located in a bustling market town that is thronged every day with people and cars bringing money into the town, suggesting that the unpleasant living conditions are more the result of poor municipal management than rural underdevelopment. The point is that improving the performance of rural schooling is as inextricably linked to the quality of local level governance and management as it is to sourcing and supporting the most competent staff.

In District B, only one interview was conducted (see Table 4), but this was the longest and most stimulating of the nine district level discussions conducted. In this interview, officials showed – by means of graphs, tables, timeframes and the like – that although they did not have a formal plan, they used data to guide their on-going engagements with schools and teachers. District B is the most highly urbanised of the four visited.

Stimulating and illuminating discussions were also held in Districts C (situated in a medium-sized provincial town) and D (in a large township adjoining the provincial capital), but the

interviewer did not get the impression that their formal plans guided their actions in any but the most general sense; the plans were not 'living documents' subject to continuous updating. It may be the case that plans which are comprised of living documents and tools cannot be formalised.

A feature which arose frequently during the majority of district-level interviews was the poor regard in which teachers are held by district officials; teachers have a very low status in the eyes of their leaders. Yet, despite their frequent complaints about teachers, SAs and other instructional leaders exhibited a sense of powerlessness in the face of what they see as laziness; they lack any sense of agency. This attitude is often attributed to the power of the unions. These features are exhibited often in some of the discussions which follow.

Q1.2. Do schools plan the timetable according to CAPS requirements?

According to CAPS, the total instructional time for Grade 2 is 23 hours, of which 10 is allocated to Languages (7-8 for HL and 2-3 for Additional Language) and 6 to Life Skills, leaving 7 hours for Mathematics. In Grade 10, 4.5 hours per week is allocated to each of HL, First Additional Language (FAL), Mathematics and Mathematical Literacy in a total weekly timetable of 27.5 hours. The degree to which schools adhere to these specifications was assessed by examining the school timetable and counting the hours spent on total teaching – in the LOLT, EFAL and Mathematics in the primary schools and in EFAL, Mathematics and Mathematical Literacy in the high schools. The results are detailed in **Table 27**.

Of the 24 case study schools, only two failed to provide for sufficient total teaching time: DPUL (22.1h) and DSRO (H) (25.7h). At primary level, all provided for the required teaching time in the LOLT and Mathematics as stipulated by CAPS and only two – BPRO(H) and DPRO(L) – did not provide for the minimum teaching time in EFAL (allocating 2 hours instead of 3). At secondary level, the majority of schools in districts A, C and D fell below the minimum requirements in EFAL and Mathematics, with six of the 12 schools short by around half an hour (10%) in at least one subject.

Q1.3 Do schools plan curriculum coverage according to CAPS pacing specifications?

Fieldworkers asked HODs whether they had an annual teaching plan with timeframes which mapped out how the curriculum would be covered over the year, when teachers were to meet to discuss curriculum matters and when formal assessment would be undertaken. Only eight of the 24 case study schools could produce an annual plan exhibiting these features. No schools in District A were able to show these plans, one primary school and one high school in each of Districts B and C could produce plans, while one primary and three high schools in District D were able to show their plans. The numbers are too small to be able to find a pattern in the occurrences which were spread relatively randomly across low- and high-performing schools.

Q1.5 Do teachers plan their lessons in accordance with CAPS pacing specifications?

All teachers interviewed were requested to produce lesson plans. In only five of the 12 high schools were all three plans presented (one each for EFAL, Mathematics and Mathematical Literacy in Grade 10). Primary schools fared slightly better, with six of the 12 schools presenting all plans requested (one each for EFAL, Mathematics and HL for two Grade 2 teachers) (Table 28). In five primary schools and one high school, none of the required plans were available. In the remaining six schools, one or two of the required plans were missing.

Regarding the state of the plans, 17 were classified as containing high levels of detail, 25 as medium and four as low, according to the following rubric:

Low:	No dates, simply lists general topics or learning objectives

Medium:	Dates and topics indicated. Some indication of content area to be covered.
High:	Dates of lessons and topics. Detail on topics provided (i.e. topics broken down into lesson units).

The worst performing district with respect to teacher planning was A, where none of the primary school teachers interviewed could produce their plans and only three of the nine secondary schools teachers interviewed could do so. In this respect, planning by teachers mirrored the poor state of planning at district and school levels. District B did marginally better: at only one primary and one high school were all teachers able to produce plans. Teachers in Districts C and D appeared more diligent in their planning: in District C, all teachers in five of the six schools could produce plans, while schools in District D fell into the same category. Again, teacher-level planning reflects the situation in the districts, although, as noted above, planning at school level seems to be relatively poorly done in all districts.

Q1.11 Are teachers keeping up with CAPS pacing requirements?

An attempt was made to check actual coverage, as seen in learner books, against teacher plans. This did not produce useful information because of two factors. First, most plans were too vague and lacking in detail to allow correlation with the curriculum. Second, it is not always possible to ascertain exactly how far coverage has progressed; this is particularly true in English and EFAL, where it is not easy to tie a particular exercise to a curriculum topic. Thus, valid data could only be collected for 13 of the 22 primary teachers, of whom 10 were ostensibly on track in terms of the topics covered. However, fieldworkers could not always determine to what extent the requisite depth was reached. For secondary teachers, the data was even more unsatisfactory and could only be completed for three EFAL teachers (three seem to be on track), six Mathematical Literacy teachers (three appear to be on track) and five Mathematics teachers (three are possibly on track).

In response to a request to explain why curriculum coverage is either behind or ahead of the year plan, 19 of the 35 secondary teachers interviewed were of the view that they would not complete the curriculum and offered a variety of reasons for this. In contrast, only seven of the 22 primary teachers interviewed were not optimistic about completing the curriculum and the reasons offered closely mirrored those of the high school teachers. Selected quotes in **Box 1** give a flavour of these responses.

Box 1: Reasons given by teachers for curriculum coverage being behind or ahead of the year plan

Only one teacher felt s/he was ahead of the year plan: *[I] am always accelerating the pace setter, I want to be ahead. In some cases the Saturday classes do help.*

Another was confident of finishing on time*: I am exactly where I am supposed to be,* a conclusion that was verified by the evaluator.

For the rest, reasons for falling behind fell into two main categories, those that blamed learners and those that ascribed lack of progress to the erosion of teaching time at the school level. The largest category of reasons for not completing the curriculum concerned a loss of teaching time, ascribed to a host of causes:

Also there were some timetables challenges in Term 1. These have now been resolved. Each class now has the 4.5 hours contact time as prescribed by CAPS. In Term 1, the contact time was 2.75 hours per week

[I] spent week 25 preparing and performing for language festival at the X High School. Therefore [I am] one week behind.

Periods [were] shortened to accommodate June exams from 45 mins to 30 mins since 12/05 [and we have] focused on revision instead of shortening a new topic to give learners a better chance to perform better in the June exams.

Remedial work based on June examination papers week one of Term 3.

One fieldworker reported that the teacher said she had to attend a plenary meeting for a debate organised by the Department of Road Safety, as well as a competition for literacy organised by her cluster.

One secondary teacher said that the school tended to concentrate efforts on Grade 12, which resulted in a relative neglect of other grades: *Our Focus Is On Grade 12. Solution: An educator who teaches grade 12 should not teach other grades. It is not possible to focus on more than one grade at a time. If you teach grade 12 properly, you will have to neglect grade 10 and 11.*

It was also common for teachers to blame their inability to get through the curriculum on inadequate knowledge on the part of their learners. Here are some examples:

My learners are too slow- they need more time than the other learners.

[I] had to deal with background knowledge and basic concepts before starting on Grade 10 work.

Learners don't do their homework, so I have to give them a chance to do their homework during class time. I can't proceed if learners haven't written something.

Sometimes I [have to] re-teach a certain topic.

[I am] two weeks behind schedule as the result of needing to re-teach work covered by student teachers.

Conclusion on planning and coverage

Very uneven practices occur across the four districts, two producing relatively useful plans, one having no plans to speak of and the third not having a full plan, but exhibiting strong evidence of on-going planning based on evidence. A feature which arose frequently during district-level interviews was the poor regard in which teachers are held by district officials; teachers have a very low status in the eyes of their leaders. In spite of this, SAs and other instructional leaders exhibit a sense of powerlessness and seem to lack a sense of agency, with this situation often being attributed to the power of the unions.

The majority of primary schools seemed to plan their timetables according to CAPS requirements. However, adhering to the timetable is quite another matter, as will be revealed in the description of school-level use of time starting on page 58 below.

The majority of high schools did not follow CAPS requirements with respect to timetabling, a number of them significantly so. This results in a significant reduction of time allocated to EFAL and Mathematics, two of the most important subjects in the high school. In the case of the high schools, adherence to the timetable was even less faithful than it was in the primary schools (**Table 27**).

Regarding school-level planning, only eight of the 24 case study schools could produce an annual plan exhibiting key curriculum events, such as formal tests and examinations and subject or phase meetings.

At the teacher level, only half the teachers were mostly compliant with the requirement to develop term plans and marked inter-district differences are apparent. Thus, no schools in District A were fully compliant and only two in District B could produce all the required plans;

in contrast, all plans but one were produced in District C and all but three in District D. In terms of the quality of plans, District D produced nine plans classified as high in detail (more than half the total), while District C produced six, followed by District B which produced two.

Regarding curriculum coverage, principals at thirteen of the 24 schools sampled reported being on track to complete the curriculum in all three subjects (HL, EFAL and Mathematics in primary schools; and EFAL, Mathematics and Mathematical Literacy in high schools). Teachers were even less optimistic than their principals in regard to this question.

The overwhelming number of teacher explanations for not keeping pace with the curriculum involved citing factors beyond their control, such as having teaching time eroded due to unplanned timetable disruptions or having to attend a workshop. Only one teacher felt that her own shortcomings were responsible for not managing to maintain the CAPS pacing requirements: *Curriculum planning is a challenge for me. I am also unable to manage my class properly [and] acknowledge all the learner's needs.*

4.1.2 Assessment

Sub-questions 1.4, 1.13 and **1.15** were clustered together because all three are concerned with assessment, at school and classroom levels, respectively

Q1.4 Do instructional leaders in schools use assessment as recommended by CAPS?

Given the centrality of formative assessment to CAPS, one would expect instructional leaders at schools, particularly the HODs who are closest to teachers, to drive a structured programme for tracking the progress of learner performance. One would expect to see them using the results to improve pedagogy, enabled by peer learning groups and other forms of in-school professional development. The topic will emerge later in this report when school-level Instructional Leadership (page 80) and In-school CPD (page 84) are discussed more systematically. At this point, we examine the eight questions shown in **Table 10**.

Data on some of the sub-questions is derived from more than one source, providing the opportunity to investigate the extent to which assessment practices were consistent within the schools. For example, one or two teachers at each primary school visited were asked the question *'Does your HOD check your assessment records?'* for each of the subjects: HL, EFAL, M. The percentage in the fourth column reflects the extent to which there was a common approach to this issue across the set of teachers interviewed in the school; any figure under 67% is considered to be an unfavourable or negative response.

In the same way, two HODs were interviewed in each high school and, where their responses contradicted each other, this indicated inconsistency between HODs. Similarly, teachers and HODs were asked the same question *'Does the HOD check teachers' assessment records?,* and the degree of disagreement between HODs (column 3) and teachers (column 4) was striking. Interestingly, in a number of schools (e.g., APRH and APRL), all the teachers interviewed agreed that their assessment records were checked by the HOD, while their HODs denied that this was the case.

Table 10: School-level instructional leadership with respect to assessment

School	How often does SMT meet to discuss ?	Does HOD check teacher records ?	Does your HOD check assessment records ?[6]	Do HODs moderate Teacher tests?	Does the SMT moderate Tests & Exams ?[7]	Use results to identify problems?	Use results to plan inter-ventions?	Does the school use assessment to guide teaching & learning?	Total negative responses
Source>	HOD Q18.1	HOD Q18.2	TS Q23 PS Q23	HOD Q18.3	TS: Q26.a.1 PS: 23	HOD Q18.2.3	HOD Q18.2.7	HOD Q18.5	
APRH	1/term	No	100	Yes	100	Yes	No	No	3
APRL	>1/term	No	100	Yes	100	No	No	No	4
APUO(L)	1/term	No	33	Yes	50	Yes	No	Yes	3
ASRH	1/term	Yes	33	Yes	100	No	Yes	Yes	2
ASRL	1/term	No	100	Yes	100	Contra	Contra	Yes	3
ASUO(L)	1/term	No	100	Yes	83	Contra	Contra	Yes	3
BPUH	1/term	Yes	100	Yes	50	No	No	Yes	2
BPUL	1/term	No	100	Yes	100	No	No	No	4
BPRO(H)	never	No	33	No	50	No	No	No	7
BSUH	Contra	No	100	Yes	83	Yes	No	Contra	4
BSUL	Contra	Yes	100	Yes	83	Contra	No	Yes	3
BSRO(L)	Contra	No	67	Yes	83	Yes	Yes	Yes	2
CPRH	1/term	No	33	Yes	50	Yes	No	No	4
CPRL	1/term	No	100	Yes	75	Yes	Yes	Yes	1
CPUO(L)	1/term	No	100	Yes	75	Contra	Contra	Yes	3
CSRL	1/term	No	100	Yes	100	Contra	No	Yes	3
CSRL(1)	Contra	No	67	Contra	67	No	No	Contra	6
CSUO(H)	Contra	No	100	Yes	100	No	Contra	Yes	4
DPUH	1/term	No	100	Yes	100	No	Yes	Yes	2
DPUL	1/term	Yes	100	Yes	100	Yes	Yes	No	1

[6] **Percent monitoring affirmatives**. *Primary schools* = (number yes/total teachers interviewed) x 100; where max total = 1-2 teachers per school x 2 subjects per teacher = 3-6 answers.
Secondary schools = (number yes/total teachers interviewed) x 100, where max total = 1 teacher per subject x 3 subjects per school = 3

[7] **Percent moderating affirmatives**. *Primary schools* = (number yes/total) x 100; total = 1-2 teacher per school x 3 subjects x 2 assessment types (tests and exams) = 6-12. *Secondary schools* = (number yes/total) x 100; total = 3 teachers per school x 1 subject x 2 assessment types (tests and exams) = 6

School	How often does SMT meet to discuss ?	Does HOD check teacher records ?	Does your HOD check assessment records ?[6]	Do HODs moderate Teacher tests?	Does the SMT moderate Tests & Exams ?[7]	Use results to identify problems?	Use results to plan inter-ven-tions?	Does the school use assessment to guide teaching & learning?	Total negative responses
Source>	**HOD Q18.1**	**HOD Q18.2**	**TS Q23 PS Q23**	**HOD Q18.3**	**TS: Q26.a.1 PS: 23**	**HOD Q18.2.3**	**HOD Q18.2.7**	**HOD Q18.5**	
DPRO(L)	1/term	No	100	Yes	100	No	No	Yes	3
DSUH	Contra	No	67	Contra	100	Contra	No	Contra	6
DSUL	Contra	Yes	100	Yes	100	Contra	No	Yes	3
DSRO(H)	Contra	Yes	100	Yes	100	Contra	Contra	Yes	3

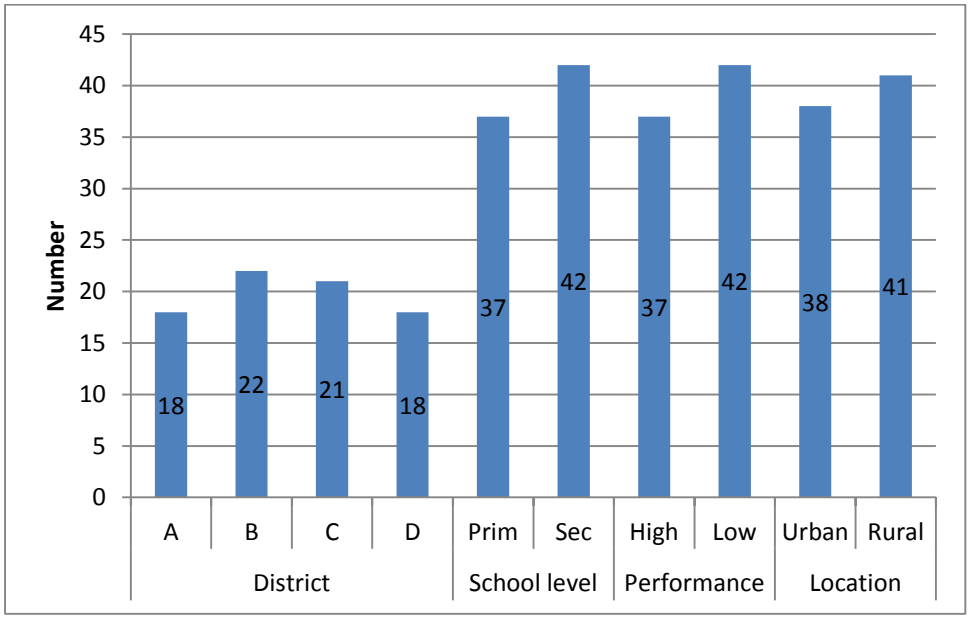
Key: HOD = HOD interview, TP = primary teacher interview, TS = secondary teacher interview

A number of other patterns exhibited by the data are worth noting. For example, in 21 of the 24 schools, HODs said that they did moderate tests set by teachers (column 5), with only one saying this was not done in her school and HODs contradicting one another in two schools. These claims were largely corroborated by teachers in the high schools. One possible explanation for the high degree of compliance could be that HODs and teachers are all aware that they should be following this practice and so say that they do, whether they actually do or not.

The same expectation (that the 'right' answer is obvious) would exist regarding the question *'Does the HOD check teacher records?'* (column 3), yet in only six of the 24 schools did HODs say that they complied with this practice. This seems to be an illogical response, since if HODs do not keep track of the assessment records, they can neither diagnose problem areas nor devise intervention strategies for addressing these. This finding accords with results from the 2014 NEEDU report indicating that many schools do not even keep records of their ANA results; that where records are kept, in the majority of cases, these records differ from those issued by DBE for their respective schools; and that schools that do analyse their ANA scores do so in a largely perfunctory manner (NEEDU 2015). To throw further contradiction into the mix, in 10 of the CAPS evaluation schools in which HODs said that they did *not* examine teachers' assessment records, they nonetheless claimed to use the results to guide teaching and learning (column 9).

The data from **Table 10** reveals an important feature which reflects on the sampling technique adopted for the evaluation (see section 3.3 above). When the total number of negative responses by school is aggregated by district, school level (primary or secondary), performance, or location (**Figure 4**), no clear patterns emerge.

Figure 4: Number of negative responses by district, school type, performance and location



According to the assumption underlying the sampling technique, instructional leadership with respect to assessment should be noticeably superior in the high-performing schools. While the high performers, as a group, do exhibit fewer negative responses than the low performers (37 vs 42), this cannot be significant, given the large variation on this metric within each group. A number of possible explanations for this lack of difference can be advanced, including the possibility that ANA and NSC scores are insufficiently valid and reliable to distinguish between schools which exhibit different degrees of instructional leadership. A second possible explanation is that instructional leadership with respect to assessment has no bearing on school performance, as measured by ANA or NSC scores. A variation of the second possible explanation is that instructional leadership is weakly exercised in all the schools observed. Whichever combination of possible hypotheses to explain the patterns shown in Figure 4is correct, it is apparent that the sampling technique did not serve its main purpose, which was to distinguish better performing schools in order to understand and describe best practices regarding instructional leadership and pedagogy. This is the main reason why the present reporting structure was adopted (see section 3.7).

Overall, school-level instructional leadership with respect to assessment was poorly done, which holds a poor prognosis for implementation of one of the central pillars of CAPS, namely to use formative assessment to improve teaching and learning. Isolated examples of good assessment practices were seen (see **Box 2**), but even those schools which appeared to be conducting their assessment practices more effectively than their peers exhibited fundamental faults. For example, at CPRL, where only one negative response was noted, the HOD said that she did not check teacher assessment records, while her counterpart at DPUL, which also exhibited only a single negative response, said that she did not use assessment results to guide teaching and learning.

Box 2: Above average assessment practices at CPRL

According to the FP HOD at school CPRL, teachers meet once a term to talk about how to help learners who need support, the control of written work, Subject Improvement Plans and items to set as school-based assessment (SBA) tasks.

The HOD said that the principal monitors her work through an analysis of her lesson plans and work plans and by means of classroom visits. As a result of this monitoring, the principal advised her to be more patient with learners and to do more activities with them, such as reading and homework. She found this advice very useful in reflecting on her own teaching practices. When asked how she moderates the tests and examinations set by teachers, the HOD said that teachers submitted the tasks with a memo and she checked whether the questions were relevant to the work schedule. She added that ANA meetings, at both school and cluster levels, have been useful when devising assessment tasks.

When asked about the support she would like from her HOD, one of the two Grade 2 teachers interviewed at the school said*: I need my HOD to tell me whether I am operating and teaching at the correct level or not.* This teacher added that she uses assessment to inform pedagogy as follows: *[It] inform[s] me about the learners' performance, [whether the] standard [is] good or bad. [It] tells me to use various methods to ensure that all learners perform to the expectations*.

Both teachers interviewed reported that they had found CAPS training to be useful. One mentioned the modules on *How To Plan And Develop Work Schedules* and *Teaching Methodology* as being particularly informative. The other teacher added that the activities comprising the training had been well planned and that explanations had been very effective in promoting understanding of the curriculum.

When asked why they were behind schedule in covering the curriculum, one teacher blamed time lost to non-timetable activities, including one day lost to a Cultural Day, one to a meeting and another to a workshop. The other teacher explained that she was unable to keep up with the curriculum expectations because her learners take time to grasp the concepts and write very slowly.

Q1.13 Do teachers use assessment as recommended by CAPS?

Regarding school-based assessment (SBA), only one secondary school teacher and two primary teachers were unable to produce their assessment records. The large majority of records seen were completed in considerable detail (see Box 3 and Box 4). However, in terms of a school-wide focus on formative assessment, assessment practices are virtually non-existent, as clearly indicated in **Table 10**. This is an area in which instructional leadership is lacking. Given the centrality of formative assessment to CAPS and given the paucity of assessment for learning practices in schools, this area offers itself as an important focus for CPD programmes. The most fertile focus for CPD of this type occurs within the school, which in turn provides a link with on-going daily practice through the mechanism of in-school professional learning communities (PLCs). Formative assessment, teacher development and pedagogy are linked in the recommendations offered in section 7 below.

The ANA initiative, all respondents agreed, is important not only for the system-level information it could provide, but also for its potential as an instrument of formative assessment. System level managers were asked whether they thought schools used the ANA tests constructively. Of the six senior DBE managers interviewed (N1-N6), all but one (who declined to answer on the grounds that he is not involved in the ANA) agreed that while their understanding of the purpose of the exercise was that it serves as a formative tool for teachers,

it had evolved to being a summative exercise. This was expressed as follows in N1: *Teachers were using them but not optimally. [They are] intended to improve teaching and learning (formative), not so much summative. This was a basis for much opposition. Some principals did use them formatively, and this revealed major weaknesses: competency around certain assessment items. Training is supposed to be based on weaknesses identified by ANA. But they are mainly used summatively to rank schools*.

The respondent in N2 agreed that the ANA had become 'high stakes' and this defeated what she considered to be its chief purpose: *We should be looking more at the processes of teaching and learning, not just the product. Even when teachers mark, they are just interested in the answer not how learners get there*.

The interviewee in N3 elaborated the point: *We started with a position of ANA being there to help identify problems; but then it became an accounting tool for completing the curriculum, maintaining a standard and school functionality; we didn't take it to the next level and make it part of promotion and progression. The unions are right [in their criticism].*

The remaining respondents at national and provincial levels were mixed in their responses, but a decided majority agreed that the ANA tests were not used constructively by schools. While all three interviewees in P7 responded by describing the many support initiatives directed to schools with respect to the ANA, two of the four interviewees in S8 said that the tests were definitely not used as intended by teachers, one was unsure and only one was positive. Of the 16 provincial level respondents, one-third abstained (saying assessment was not their field), one-third thought the ANA could be useful and the remaining third dismissed the ANAs, with one respondent describing them as mere '*statistic producers*'.

Q1.15 Are teachers pitching material at the recommended levels of cognitive demand?

Since it is sometimes difficult to assess the level of cognitive challenge of the material presented in lessons and since such assessment is subject to high variability within any team of fieldworkers, it was decided to answer this question through an analysis of the formal tests set by teachers. Fieldworkers were instructed to take one example of a formal assessment task (preferably the test set at the end of Term 1) in each of the subjects in which teachers were observed and return the example to the office for detailed analysis. The motivation for this was that the tasks would then be examined against CAPS requirements by a single analyst in order to optimise the validity and reliability of the results. However, returning the tasks to the office proved to be difficult, since photocopies could not be made at a number of schools for one reason or another, while in other cases teachers did not have copies of the tasks available. As a result, no systematic analysis was possible; the examples which follow give a flavour of the best assessment practices reflected in the documents that were available (**Box 3** and **Box 4**).

Box 3: Assessment records in G2 Mathematics at CPUO(L)

The two Grade 2 teachers interviewed gave serious attention to setting, administering and recording the assessment tasks specified by CAPS in all three subjects (HL, EFAL and Mathematics). The treatment of Mathematics is given as an illustrative example. Test results are recorded in detail, with separate headings for Number Operations, Patterns, Algebra, Space and Shape, Measurement, Data Handling, total score, percentage and level. Separate sheets were prepared for Term 1 and Term 2, the latter already being populated even though the visit occurred on 30 May. Each of the two term tests examined, handwritten by the teacher, was accompanied by a detailed memo and signed off by the HOD.

The test for Term 1 was relatively extensive, containing 10 items covering a number of topics: reading numbers off a number line, performing elementary calculations,

reading a bar chart, reading a calendar, telling the time, and working with money. The most difficult calculation (20 – 5) was deemed to be at the right level for Grade 2.

The Term 2 test was similar, containing 12 items on: multiples, completing number sentences, adding money, identifying symmetry, writing the names of numbers in words, identifying fractions, reading a bar chart and naming the value of a particular digit in a two-digit number. It was also deemed to assess knowledge at the appropriate level for Grade 2.

A very similar approach was adopted for both HL and EFAL. These documents reflect a coordinated, school-wide approach to assessment, following CAPS guidelines and coordinated by the HOD.

Box 4: Assessment records in G10 maths at DSUH

The province issues common tests, investigations and assignments in Grade 10 to all schools, formally set out in NSC examination format. The results are recorded on what appears to be a South African School Administration and Management System (SA-SAMS) data sheet on which marks are entered and the weightings, percentages and levels calculated by the programme.

The March quarterly test contained items on: classification of numbers, binomial and binomial x trinomial expansions, factorisation, simplification of algebraic fractions, solution of trinomial and exponential equations and linear inequalities and arithmetic sequences.

The investigation contained three items, two exploring number patterns and the third finding a relationship between the vertices, faces and edges of three dimensional plane objects.

The Term 2 assignment was very extensive, containing questions on: Graphs and Functions (linear, parabolic and hyperbolic), Number Patterns, Trigonometry (including the solution of trig equations and graphing trig functions), a three-dimensional problem involving distances, angles of depression and direction, geometric calculations and the solution of a rider involving parallelograms.

All three papers reflected the CAPS standards across a range of cognitive levels.

Conclusion on assessment

In summary, despite some good practices, the evidence is strong that the majority of HODs are not following the letter of CAPS policy regarding assessment, let alone achieving its spirit. Clearly, there is little coherence within most schools concerning the use of assessment to improve teaching and learning: while schools pay considerable attention to formal assessment, setting, administering and marking tests and examinations, their most important use is for promotion purposes and their formative potential goes largely unrealised.

Unfortunately, test papers could not be obtained for the majority of teachers interviewed. The data in **Table 10** suggests that the fact that papers were not available is due to poor assessment practices. The few papers that were reviewed, at both Grade 10 and Grade 2 levels, exhibited a high degree of compliance with CAPS requirements and close cooperation between teachers and HODs in establishing the standard of the papers. This is a promising

finding, indicating that instructional leadership in this area can assist in achieving the standards of the curriculum. On the negative side, this influence appears not to extend to the promotion of formative assessment practices.

4.1.3 Availability and use of LTSM

Q1.6 Do teachers have the LTSM recommended by CAPS?

Teachers and HODs were asked about the availability of LTSM in the subjects they are responsible for. The tables below reflect the findings on the availability of LTSM at primary and secondary schools, respectively. This data is not based on empirical observations of actual books, but on responses by HODs and teachers during the interviews; it must therefore be treated with some caution. The ticks in

Table 11 and **Table 12** indicate agreement between teachers and their HODs as to whether books were available.

Table 11: Availability of LTSM in primary schools

SCHOOL	HOME LANGUAGE (LOLT)						EFAL						MATHEMATICS					
	Graded readers		DBE work-book		Text-book		Graded readers		Text-book		DBE work-book		Text-book		Manipulatives		Computers	
	Available	Sufficient	Available	Sufficient	Available	Sufficient	Available	Sufficient	Available	Sufficient	Available	Sufficient	Available	Sufficient	Available	Sufficient	Available	Sufficient
APRH			✓								✓							
APRL	✓		✓	✓			✓				✓	✓			✓	✓		
APUL			✓				✓				✓							
BPUH			✓				✓				✓	✓						
BPUL	✓	✓	✓	✓			✓				✓	✓			✓			
BPRH			✓	✓							✓	✓			✓	✓		
CPRH	✓		✓		✓	✓	✓		✓		✓							
CPRL		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓			
CPUL	✓		✓	✓	✓	✓	✓		✓	✓	✓	✓			✓	✓		
DPUH	✓	✓	✓	✓			✓				✓	✓			✓	✓		
DPUL	✓		✓	✓	✓		✓				✓	✓						
DPRL	✓		✓	✓	✓						✓	✓						

Note: Sufficient = a book for every learner;
✓Yes

Table 12: Availability of LTSM in secondary schools

SCHOOL	MATHEMATICS & MATHS LITERACY						ENGLISH FIRST ADDITIONAL LANGUAGE									
	Textbook		Calculators		Computers		Text book		Short Stories		Novels		Drama		Poetry	
	Available	Sufficient	Available	Sufficient	Available	Sufficient	Available	Sufficient	Available	Sufficient	Available	Sufficient	Available	Sufficient	Available	Sufficient
ASRH	✓															
ASRL																
ASUL			✓													
BSUH	✓	✓	✓				✓		✓		✓	✓			✓	
BSUL	✓		✓				✓				✓					
BSRL	✓		✓				✓		✓						✓	
CSUH	✓		✓				✓				✓					
CSRL	✓		✓				✓									
CSRL																
DSUH			✓		✓		✓									
DSUL	✓		✓				✓	✓	✓						✓	
DSRH	✓						✓	✓								

Note: Sufficient = a book for every learner;
✓ Yes

In District A, the reported shortage of LTSM was critical, especially in secondary schools. None of the secondary schools in the sample had any of the LTSM prescribed for EFAL, as agreed by educators in the school. At one secondary school, ASRL, there were no LTSM at all; the only resource for Mathematics and Mathematical Literacy at ASUL were calculators; and textbooks were the only LTSM at ASRH. Neither of these resources were available in sufficient quantities at either school. The HODs interviewed in this district were unanimous that every year the textbooks ordered are either short delivered or not supplied at all.

The situation in primary schools in District A was much the same. The teachers interviewed at two schools highlighted the lack of resources as a major obstacle to teaching and learning. The exception was APRL, a low-performing rural school, which stands out as being reasonably well-resourced. DBE workbooks for HL and Mathematics, as well as maths manipulatives, were available in sufficient quantities at this school. There were also graded readers for HL and EFAL, although not enough for each learner to read alone.

In the secondary school sample, schools in District B stand out as the best resourced, as reported by educators. There were calculators and textbooks for all subjects at all schools, though not always in sufficient quantities for all learners to have their own. Although the

schools did not have literature textbooks for all genres, a textbook was available for at least one genre at each school.

Q1.7 Do teachers use LTSM as recommended?

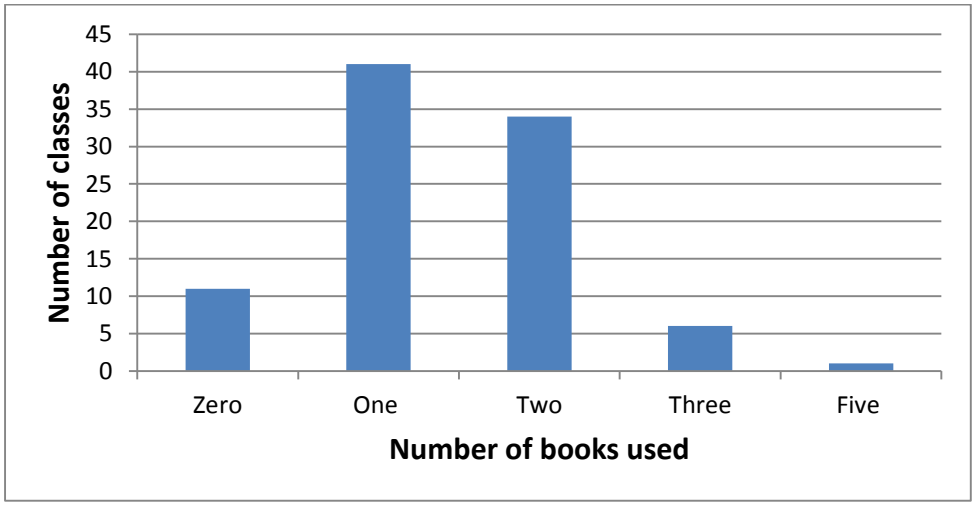
One thing that fieldworkers looked for while undertaking the classroom observations was the use of books by learners. These materials not only had to be present, but learners had to be involved in using them to read, write and/or discuss. Data for book use was not available in three EFAL Grade 2 classes, one in District C and two in District D, giving a total of 93 lessons observed for which data is available on this index.

Ten kinds of LTSM were seen across the 24 case study schools (Table 36). The most frequently used book was a Mathematics exercise book, used in 36 classes, a very high proportion (84%) of the 43 Mathematics or Mathematical Literacy classes observed. The next most frequently used book was a Language exercise book, observed to be used in 29 (58%) of the 50 Language classes seen. Following in order of frequency were the DBE Mathematics workbook (in 11 or 55% of the Grade 2 Mathematics classes observed), the DBE Language workbook (in 19 or 50% of the 38 Grade 2 Language classes observed) and the Mathematics text book (in 18 or 42% of the 43 Mathematics or Mathematical Literacy classes observed). In close to 40% of all classes observed, no printed materials (as opposed to exercise books), either in the form of textbooks or DBE workbooks, were used during the lessons seen.

In terms of the numbers of copies of books in each of the classes observed, the most abundant books were again Mathematics exercise books: in only two classes using Mathematics exercise books did some learners share books; in the other 34 classes, each learner had his/her own copy. In all 29 classes using Language exercise books, all learners had their own copy. Also well distributed were the DBE Language workbooks, with learners having their own copies in 18 of the 19 classes in which these books were used. Similarly, learners had their own individual copies of the DBE Mathematics workbooks in 10 of the 11 classes in which they were used. In comparison, Mathematics textbooks were in much shorter supply, with learners having individual copies in only four of the 18 classes in which they were used; in nine classes, Mathematics textbooks were shared and in five classes, only the teacher had a copy.

The most common number of books used in the classes observed was one, seen in 41 classes, followed by two books used in 34 classes (**Figure 5**). In 11 classes (11.8%), no books were used at all.

Figure 5: Number of books used in classes observed (N=93)



Where only one book was used, it was likely to be a Mathematics or Language exercise book. The most common combinations of books were the DBE Language or Mathematics workbook with the relevant exercise book.

Differences in the number of books used per class did not differ between the primary (1.43) and high school (1.40) sub-samples (Table 37). There were, however, differences by district in both. In the primary school sample, District A (0.88 books used per class) and District C (0.94) used significantly fewer books than District B (1.94) and district D (1.81). A different pattern was visible in the high schools, with Districts A (1.33) and D (1.25) using fewer books per class than Districts B (1.56) and C (1.44). Overall, teachers in District B were the most frequent users of books at both primary and high school levels.

Looking at the number of books per class by high- and low-performing schools, at primary school level, high performers (1.38) used marginally more books than low performers (1.26). There was little to distinguish high (1.45) and low (1.50) performing high schools in this regard.

Q1.12 Are learners writing at the recommended levels both quantitatively and qualitatively?

Given the importance of writing to the learning process, we focus significant attention on the Language and Mathematics exercise books of learners in the classes observed.

Primary Schools

DBE workbooks

Table 36 indicates that DBE workbooks were the most frequently used printed materials in the Grade 2 classes observed. While a number of previous studies have examined the quantity and quality of writing in learner exercise books, the present study, for the first time, supplements exercise book data with information concerning the precise use of the DBE workbooks. The results are shown in **Table 13**.

An important feature of the patterns seen in **Table 13** is that the number of pages produced by learners of the two teachers within each school were generally very similar, despite sometimes large differences in the teachers' respective test scores. (Teacher test scores are discussed in more detail in response to Q2.2 commencing on page 67 below). To illustrate this point, attention is drawn to the large differences in EFAL scores of the two teachers in schools BPUH (71 and 48), CPRH (19 and 48) and DPUL (48 and 14). Yet, in all three cases, the numbers of pages covered by learners of these paired teachers were relatively close to each other (64.3 and 58.0; 31.0 and 25.5; 65.0 and 67.0).

These patterns would seem to beg two hypotheses with regard to the use of the DBE workbooks. One is that rural schools do not write as much as their urban counterparts: the six rural primary schools for which data is available produced an average number of pages per school of 32, compared with the average of 59.7 pages produced by the four urban schools.

Table 13: Number of pages covered in DBE workbooks, Grade 2 EFAL

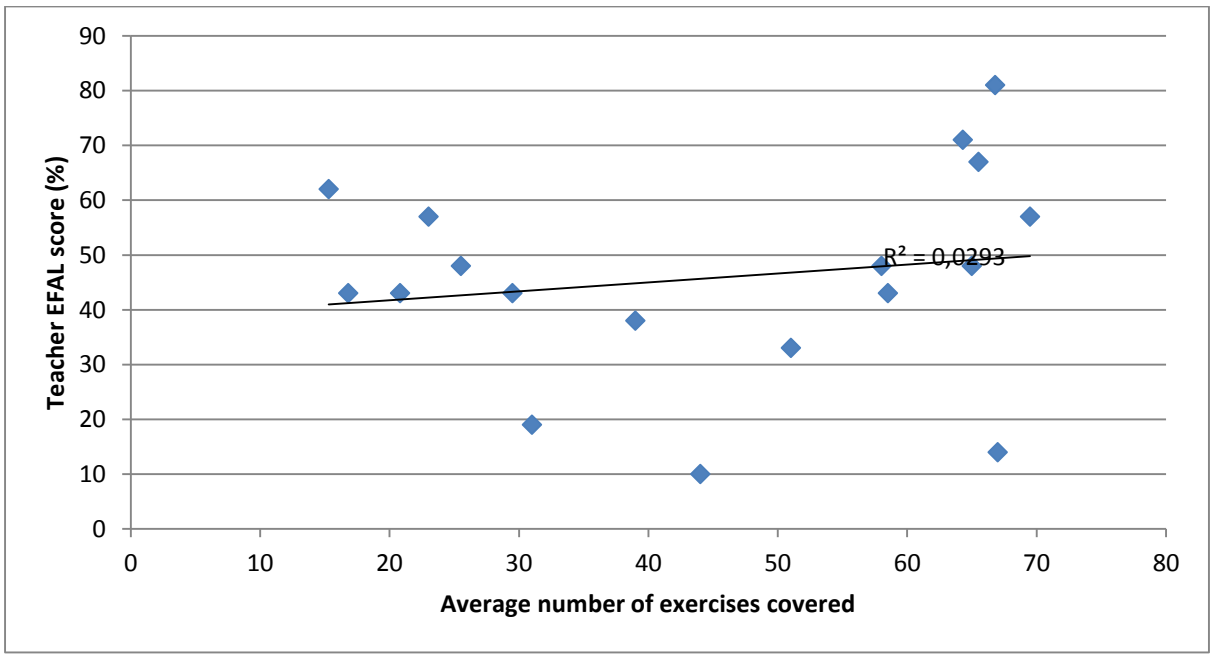
DIST	SCHOOL	TEACHER 1						TEACHER 2						School Mean	Dist mean
		L 1	L 2	L 3	L 4	Mean	Teacher EFAL score	L1	L2	L3	L4	Mean	Teacher EFAL score		
A	APRH	16	32	69	n/ av	39.0	38	n/ av						39.0	

	APRL	15	20	15	11	15.3	62	n/ av						15.3	25.4
	APUO (L)	n/ av													
B	BPUH	62	66	64	65	64.3	71	62	63	61	46	58.0	48	61.1	43.7
	BPUL	n/ av													
	BPRO (H)	31	31	28	28	29.5	43	23	23	23	23	23.0	57	26.3	
C	CPRH	32	23	37	32	31.0	19	23	27	25	27	25.5	48	28.3	30.2
	CPRL	23	17	23	20	20.8	43	18	16	19	14	16.8	43	18.8	
	CPUO (L)	83	56	n/ av	n/ av	69.5	57	41	47	n/ av	n/ av	44.0	10	56.8	
D	DPUH	60	58	58	58	58.5	43	51	45	49	59	51.0	33	54.8	62.0
	DPUL	67	63	62	68	65.0	48	68	68	64	68	67.0	14	66.0	
	DPRO (L)	67	66	67	67	66.8	81	66	65	n/ av	n/ av	65.5	67	66.3	

Note: n/av = Data not available

A second hypothesis suggested by the data in **Table 13** is that, school level processes, exercised through instructional leadership by the SMT, seem to be a stronger influence on the quantity of learner writing than do teacher attributes represented by test scores. Thus the correlation between teachers' scores on the EFAL test and the number of pages of writing produced by their learners is very low (**Figure 6**). The case cannot be reliably made from such a small sample, but if it is true, then it would indicate that strengthening instructional leadership is an important potential lever in increasing the quantity of learner writing.

Figure 6: Average number of exercises in DBE workbooks vs teacher score, Grade 2 EFAL



The patterns of Grade 2 DBE workbook usage in Mathematics largely followed those for EFAL (see **Table 14**). Here too, the correlation between teachers' Mathematics test scores and the

number of pages completed by their learners is low and, in some cases, the associations are counter-intuitive. For example, Teacher 2 at CPRH scored 5% on the Mathematics test, compared with her colleague, Teacher 1, who scored 60%. Yet learners of Teacher 1 produced only 30 pages, compared with the 58.3 produced by the learners of Teacher 2. Another example from **Table 14** is provided by Teacher 1 in DPRO(L) (Mathematics score 15%), who was not only keeping up with Teacher 2 (Mathematics score 90%) in terms of page production, but actually produced 28% more work.

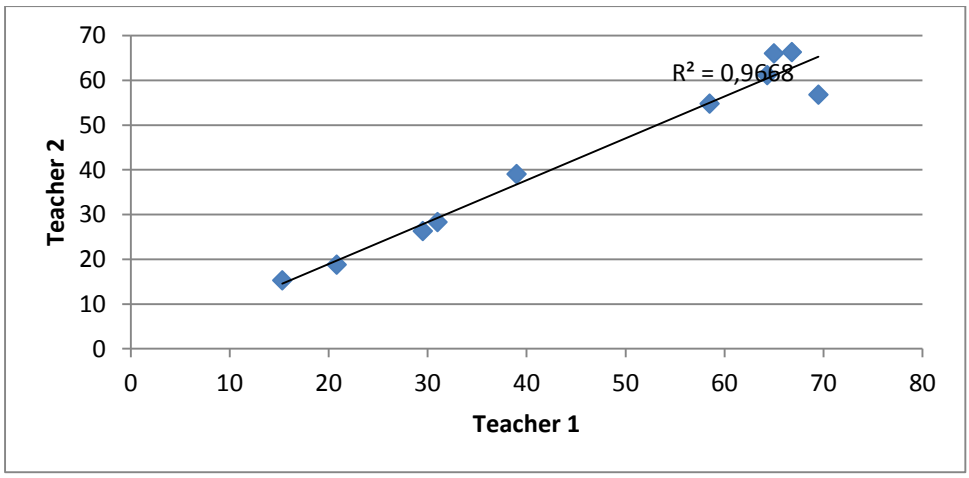
Table 14: Number of pages covered in DBE workbooks, Grade 2 Maths

DISTRICT	SCHOOL	TEACHER 1		TEACHER 2		School Mean	Provincial Mean
		Mean	Teacher Maths score	Mean	Teacher Maths score		
A	APRH	82.0	35	n/av	n/av	82.0*	53.2
	APRL	12.5	35	n/av	n/av	12.5*	
	APUO(L)	65.0	45	n/av	n/av	65.0*	
B	BPUH	48.0	25	84.0	40	66.9	59.0
	BPUL	110.0	50	70.5	60	85.0	
	BPRO(H)	31.5	25	18.5	50	25.0	
C	CPRH	30.0	60	58.3	5	44.1	43.2
	CPRL	43.0	30	65.0	35	54.0	
	CPUO(L)	31.0	20	32.3	20	31.6	
D	DPUH	107.0	25	132.0	50	119.5	109.6
	DPUL	111.5	25	104.0	25	107.8	
	DPRO(L)	114.0	15	89.3	90	101.6	

Note: *Calculation based on one teacher

A second parallel between the use of DBE workbooks in EFAL and Mathematics is the apparent school-level effect, where learners across different classes in the schools produced similar quantities of written work while, as in the case of EFAL (**Figure 6**), correlation between teacher test scores in maths and the quantities of writing produced by their learners is very low. But the correlation between the work produced by learners from different teachers *within schools* is very high (**Figure 7**).

Figure 7: Number of pages covered in Grade 2 EFAL DBE workbooks per school: Teacher 1 vs Teacher 2



A district-level effect is also apparent. In District D, learners produced considerably more work than their counterparts in the other three districts. Learners in District D produced an average of 109.6 pages, compared with 43.2 pages in District C. The former is also roughly double the amount of work produced in District A (53.2 pages) and District B (59 pages).

However, there were some stark exceptions to this tendency, shown in the case of APRH, whose learners, operating from a deep rural base, produced an anomalously high page count. This exception runs counter to a third parallel between EFAL and Mathematics learner output: the strong influence of a rural setting. The five rural primary schools (APRH was discounted) produced an average number of pages per school of 44.9, compared with the average of 68.5 pages produced by each of the six urban schools.

In order to obtain an idea concerning the amount of reading/writing work done in relation to CAPS requirements, the total number of school days which, on the day of the visit, had elapsed since the start of the school year was calculated. Assuming that learners should write every day and that this would take up around one page of the DBE Mathematics workbook, a maximum number of pages which could have been covered by the time of the visit was calculated. This number was compared to the actual number of pages covered. The results show a wide variation between schools and between districts (**Table 15**).

Table 15: Percentage of school days on which work was done, DBE workbook, Mathematics Grade 2

District	Max	Actual	Actual as a percent of max	Range
A	120	53	44	12 – 82
B	65	59	91	25 – 85
C	65	43	65	31 – 54
D	120	109	91	101 - 119

Interestingly, in two of the districts, the averages for the schools in each district were close to the theoretical maximum (91%). Less impressive is that one district reached less than half (44%), while the other reached around two thirds (65%) of the maximum. Also of great concern is the range exhibited in these averages: for example, in District A, the number of pages covered in the same period by two schools varied from 12 to 82. In this regard, District D stands out: not only did it produce the highest average number of pages, but the range was small, varying from 101 to 109. These latter figures indicate that working from the workbooks is a high priority in the district and that SAs exert strong instructional leadership in this regard.

The same analysis was applied to the DBE Literacy workbooks and the data reveals the same patterns as those shown for Mathematics.

Mathematics exercise books

Two learner exercise books were analysed for each teacher interviewed. Regarding Grade 2 Mathematics, fieldworkers counted the number of pages written for each of the main topic areas: Number Concept, Pattern, Shape, Measurement and Data Handling. Teachers in District A and District C focused on the content area of Number Concept, at the expense of the other four content areas. Whilst CAPS does prescribe that the Number Concept area receives the highest weighting, at 58%, it is clear that the other four content areas were not receiving the required emphasis. In five schools in the sample, at least one teacher (and both at BPRH and DPUL) had not produced any work in Data Handling, even though this

constitutes 5% of the curriculum in Mathematics and teachers had performed reasonably well in this content area in their test scores.

In District A, the amount of work produced was extremely low. Learners in APRH had done no more than seven exercises since the start of the year and these were concentrated on Number Concept and Shape; there were no exercises in any of the other content areas. Yet according to the HOD and teachers interviewed, learners' books were monitored once a term and the only focus was to check that learners were writing regularly. Clearly, the monitoring was perfunctory, with little or no impact on practice.

There were also significant differences in curriculum coverage by teachers within the same school (in contrast to the finding noted above of similarities in the numbers of DBE workbook pages covered by learners of the two teachers). An example is CPRH, where there was evidence in exercise books of written work in all five content areas for Teacher 1, while Teacher 2 had not done any work on Pattern, Shape or Data Handling in the exercise books. Notably, the FP HOD at the school reported monitoring learners' exercise books once a term.

EFAL exercise books

In the Grade 2 language exercise books (EFAL and HL), researchers counted the number of exercises done in Phonics, Reading Comprehension and Extended Writing. The main purpose was to determine whether these topics were being covered as prescribed. In the EFAL books, the amount of written work in the different components of language varied considerably, both between schools and within the same school. However, overall the results replicate those established by a number of earlier research studies (De Chaisemartin, 2013; NEEDU, 2013; 2014): far too little writing is done by learners and, in particular, extended writing is very poorly attended to.

Phonics stands out as the area with the most exercises, except in District B where, most unusually, it was surpassed by the number of exercises in Extended Writing. With the exception of District C, which had the fewest exercises in Extended Writing, the other three districts produced the fewest exercises in Reading Comprehension. In fact, at five schools, there was no evidence of exercises in Reading Comprehension from at least one teacher, while at DPUH neither of the teachers had produced any work in Reading Comprehension.

Notably, schools in District C had produced the most exercises in Reading Comprehension in their exercise books, whereas in the DBE workbooks they had covered half (49%) of the work compared to the average learner in District D, and two-thirds (69%) compared to those in District B. However, not all schools sampled in the district necessarily followed this pattern. For instance, the analysis of the exercise books of Teacher 2 at CPRL reflected as many as 12 exercises in Reading Comprehension in the books of two learners, while there was no work at all in Phonics or Extended Writing in any of this teacher's exercise books. These gaps in learners' work are particularly concerning, given that at this school learner's written work was being monitored by the HOD once a term, one of the main purposes being to check that the content of learner work was up-to-date according to the year plan.

Meanwhile, the schools in District A reflected the smallest amount of work in Reading Comprehension exercises as well as coverage of the DBE workbook. At APUL, the teacher had not done any exercises at all in Reading Comprehension. Clearly, these teachers are doing very little to develop Reading Comprehension or any of the other language skills for learners in these schools.

HL exercise books

The situation regarding learner work in HL follows the same pattern as that in EFAL, with the most work produced in Phonics. Here too, the smallest amount of work had been done in

Reading Comprehension. District A stands out once again, not only for producing the least work, but because the amount of work was so much less than in any of the other districts.

There is also an unevenness in the teaching of Handwriting. While there was evidence that handwriting practice had been done by most teachers, the number of exercises ranged from as few as one to as many as 22. Handwriting practice is necessary, not only for writing legibly, but to accelerate the speed of writing and develop motor memory. Without sufficient opportunities to develop handwriting *per se*, learners will be disadvantaged later on because their ability to record information at the level of cognitive demand consistent with the higher grades will be hampered by their poor handwriting skills.

Most importantly, Extended Writing was done most infrequently, with most learner books not exhibiting a single instance of this kind of writing.

Secondary Schools

The exercise books of two learners from each of the teachers interviewed were analysed. Fieldworkers counted the number of exercises in each content area.

Mathematics Grade 10

The detailed results by school are given in **Table 39**. The amount and range of work done in different content areas varied between teachers at different schools. For example, in District B, the teacher at BSUH produced an average of 36.1 exercises, covering work in all content areas; in contrast, at BSUL, the learner work reflected far more exercises, an average of 50 in total, but there was no work done in Euclidean Geometry. Similarly, in District A, the teacher at ASRH produced significantly less work in Functions (3 exercises on average), Number Patterns (1) and Algebra (17.5) than her counterpart at ASRL, whose learner books produced evidence of 15, 3 and 10.5 exercises on average in the respective content areas.

In most cases, learners produced the most work in the three content areas with the highest weightings: Algebra (16.7%), Functions (22.2%) and Trigonometry (22.3%[8]). The amount of exercises generally exceeded the prescribed weightings at the expense of the other content areas. A case in point is CSRL, where the 16 exercises done in Algebra constituted 68.8% of the total work – more than four times the weighting prescribed by CAPS. Meanwhile, the proportion of work done by this teacher in Functions (19.4%) and Trigonometry (11.8%) was below the prescribed weightings; and there was no evidence of any written work in Number Patterns or Geometry.

The biggest gap was in the content area of Euclidean Geometry: only three schools, BSUH and both schools in District C (CSRL, CSUH), produced evidence of work in this area. Interestingly, with the exception of BSUH, where the teacher had produced work in both Euclidean and Analytical Geometry, most teachers had done exercises on Analytical Geometry, even though this content area is not prescribed for Terms 1 and 2.

In District C, there was no work on Number Patterns.

Mathematical Literacy Grade 10

As with Mathematics, the amount and range of work differed between teachers/schools (Table 40). In District B, the teacher at BSUH had done more than twice as many exercises on average in Number (18.4), Patterns (4.0), Finance (9.0) and Measurement (1.8) when compared with BSRL, where there was evidence of 7.3, 1.5, 4.5 and 6.3 exercises on average in the respective content areas. Neither of these teachers had done any work yet on Probability or Data Handling.

[8] Total for Trigonometry (16.7%) and Trigonometric Functions (5.6%) combined.

Throughout the sample, the most work had been done in Number Calculations. More than 50% of the work produced by over half (6/10) of the teachers was on Number Calculations, although this content area is allocated five to six weeks during the year and should therefore account for roughly to 16-17% of all work covered. In contrast, there were very few exercises on Data Handling, even though approximate weighting in this content area is 13-14% of all work to be covered. In District B and District D there were no exercises at all on Data Handling.

EFAL Grade 10

In the language exercise books (EFAL and HL), researchers counted the number of exercises done in Literature, Reading Comprehension, Language Structures, as well Writing Short Transactional Texts and Extended Writing. The findings per teacher, along with their test scores for English, are detailed in **Table 41**.

The amount and range of work varied considerably between schools and districts. In District D, learners at DSUL had done a fair amount of work in Literature (averaging 12.8 exercises), Reading Comprehension (4) and transactional writing (7.8); whereas their counterparts at DSRH had produced around a quarter of the amount of work averaging 3.5, 1 and 2 exercises respectively in each of these components. This is most probably due to the lack of books. Language Structure was the only component in which the work of learners at DSRH exceeded the work of those at DSUL; this is hardly surprising, given that the only EFAL resource available at DSRH was the textbook for EFAL. However, this does not explain why learners had only done one exercise in Reading Comprehension since the start of the year.

Meanwhile, in District A and District C, learners had done on average only one Literature exercise since the start of the year. This is hardly surprising, given the dire shortage of Literature books throughout the sample; this is especially acute in District A – none of the schools visited had any of the Literature books necessary to deliver the curriculum. (See discussion on the availability of LTSM at schools). With the exception of ASRL, the amount of work done generally in District A is concerning. At ASRH, learners had produced only one piece of Extended Writing and between 1 and 2 Transactional Texts in Terms 1 and 2.

The amount of Extended Writing done at CSUH is even more concerning. There was evidence of only one piece of Extended Writing in the book of one learner, while the second learner had not done any Extended Writing at all. Yet learners had produced between seven and eight exercises in Transactional Writing and nine to ten exercises in Language Structures. This suggests the teacher may not have the confidence to teach this language skill.

There was no correlation between the teachers' proficiency in Language, as indicated by their test scores, and the amount and type of work produced by their learners. For example, the EFAL teacher at ASRH achieved 71% on the test, yet had produced only nine exercises, while learners at BSRL had produced twice as many (18.6) exercises even though the teacher had scored only 19% on the test. In fact, learners in District A did the least work, even though their teachers achieved an average of 72.3% on the test – the second highest after District D.

Conclusion on availability and use of LTSM

Teachers and their HODs reported a dearth of LTSM at schools throughout the sample and, in most cases, the shortage is acute. In the primary school sample, the only resource available at all schools was the DBE workbook, although these were not always available in sufficient quantities – that is, one book for every learner. Meanwhile, in the secondary school sample, one-third of the schools (4/12) did not have textbooks for Mathematics, Mathematical Literacy and/or EFAL; two of these schools did not have calculators either.

These reported shortages are puzzling in the light of the large budget allocations for LTSM in the majority of provinces. In many schools, the information provided by teachers differed from that provided by their HODs. In some cases, HODs reported that the school had more LTSM

than teachers said they had, while in other cases, HODs said resources were not available, or not available in sufficient quantities, the opposite of what the teachers said. While this clearly indicates a lack of effective management and oversight of LTSM, the contradictions may arise for different reasons. It may be, for example, that teachers had been issued with resources which have been packed away and never used or that resources were available at the school but had not been distributed to teachers to use in class. Without a thorough stocktaking, it is impossible to pinpoint the reason for the different reports on LTSM from the same school, but the inconsistencies signal a weakness in instructional leadership and school management and administration.

Whatever the reasons for the reported shortages of books, the classroom observations showed that in nearly two-fifths of classrooms, no LTSM were used. Very few of the wide range of materials recommended by CAPS (see **Table 36**) were seen. In many cases, where they were observed, they were present in insufficient quantities to enable individual learner access. These observations give support to the claims by teachers and HODs alike that schools are short of LTSM. For example, although Mathematics textbooks were seen in 18 (42%) of the Mathematics and Mathematical Literacy classes observed, in only four classes did learners have in their own copies; in five classes there was only a copy for the teacher; and learners shared copies in the other nine classes.

Something of an exception is provided by the DBE workbooks: not only were they present in most primary schools, but teachers clearly found them relatively easy to use in class. In Grade 2 Language and Mathematics classes, the DBE workbooks were used in half the lessons observed. The next most frequently used form of LTSM were Mathematics textbooks, which were observed in use in 42% of Mathematics or Mathematical Literacy classes. The most frequently used books were Mathematics and Language exercise books (used in 84% of the Mathematics or Mathematical Literacy classes observed and in 58% of Language classes, respectively).

Regarding learner writing, at primary school level, the high variation in the quantity of writing produced by schools in the same district shows weak instructional leadership with respect to writing emanating from the district. Interestingly, although instructional leadership at school level is generally superficial and compliance focused, the similar numbers of pages of writing produced by teachers within each school indicates some level of leadership in this regard. Schools in District D, where relatively large quantities of writing were evident in all schools, demonstrate what can be done under conditions of high poverty in a rural setting.

In the high schools, the similar levels of variation between schools within the same district confirm that weak instructional leadership is exercised from the district regarding writing. There were also variations in terms of how much of each topic was covered. In some cases, the low quantities of certain types of writing could be traced to a shortage or absence of suitable books (e.g. Literature, Grammar). The relative neglect of certain types of writing on certain topics may also be related to teacher knowledge weaknesses. In this regard, the paucity of writing in Euclidean Geometry in Mathematics exercise books was noticeable, probably reflecting an area in which training is needed. Similarly, low quantities of Extended Writing in EFAL, particularly noticeable in some schools, probably reflects weaknesses in this area on the part of teachers.

4.1.4 Time management

Q1.8 Is time optimally managed at the school level?

According to district officials interviewed, time management is a problem in all four districts. Interviews with district officials produced estimations of the extent of the problem which vary widely within the same district, indicating that no attempt has been made to assess the problem's precise extent. In the case of high schools, the NSC results are generally used by district officials as a measure of the problem, but this is a very crude proxy. Explanations for

dysfunctionality offered by interviewees converged on weak leadership and the negative attitudes and poor discipline exhibited by some educators who, according to a number of district officials, are protected from disciplinary action by the unions. At the same time, respondents in all districts visited were quick to point out that many schools ran smoothly and managed the timetable well. These points are illustrated through the following details from the districts visited.

In District A, there was agreement across the three interviews that poor school functionality was a problem, with interviewees ranging in their views as to the extent – from 'some schools' to 80%. One respondent described the situation as follows: ***…****exam marking continues into the 3rd term, so there is no teaching. You ask for school plans in March, but they still don't have them; we ask for them, but they still aren't there the next time we come. Analysis of performance is very poorly done, if at all*. Another offered the view that a culture change had occurred: *Priorities have changed: it's now about survival more than anything else; people don't care anymore. Some teachers live far away in larger towns and then stay away from school often*.

Respondents in District B generally agreed with the latter sentiment, citing a lack of accountability as the greatest problem in the school system. The six senior curriculum officials who participated in the interview showed considerable impatience with the behaviour of many schools and teachers, although, along with interviewees in the other three districts, they were quick to point out that many schools functioned very well, many of them working under difficult, resource-poor conditions.

In District C, one respondent felt that 30% of schools may be affected by poor time management, but this was disputed by another who put the figure at 1%. A third respondent attributed the problem to a lack of discipline among teachers and the fact that they are protected by the unions.

In District D, one interviewee said that, judging from the NSC results, 15% of schools were not functional and there is another cohort which was not stable, performing adequately sometimes, but then slipping into dysfunctionality. In one interview, respondents attributed a dysfunctional school environment to poor leadership: *SMTs are not supporting HODs. We find problem in schools, e.g. assessment not done, curriculum coverage inadequate, etc., but the SMT is not doing anything*. In another interview, a respondent pointed out that the Human Resources (HR) issues involved in dealing with weak leadership are difficult to manage: …*one principal was demoted, but he appealed and won the appeal*.

At school level, fieldworkers asked the principal, HODs and teachers what the extent of poor time keeping on the part of both teachers and learners was, with respect to arriving late in the morning and not being in class when they should be. More objectively, the fieldworkers observed how many classes were without teachers during the first period on the second day and the last period on the first day of the fieldwork. The results are shown in **Table 16**.

The most striking feature of **Table 16** is the large numbers of teachers who were not in class during the first or last periods. Across the sample, an average of more than four teachers per school were somewhere other than in class at these times, usually because they were not at school; this constituted an average of 18% out of class in each school during both periods of measurement. Strikingly, only two principals thought that teacher late-coming was a problem and two thought that teachers getting to class late was a problem, views which are clearly at odds with observations made by fieldworkers. This issue is explored in some detail in **Box 5**.

Table 16: Timekeeping practices at schools

SCHOOL	No of teachers	TEACHERS NOT IN CLASS			
		DAY 1: LAST PERIOD		DAY 2: FIRST PERIOD	
		No	%	No	%
APRH	21	7	33.3	7	33.3
APRL	20	4	20.0	3	15.0
APUO(L)	24	n/av		3	12.5
ASRH	46	13	28.3	3	6.5
ASRL	17	4	23.5	4	23.5
ASUO(L)	42	2	4.8	6	14.3
BPUH	n/av	1		1	
BPUL	n/av	4		2	
BPRO(H)	24	3	12.5	3	12.5
BSUH	21	1	4.8	4	19.0
BSUL	20	0	0.0	8	40.0
BSRO(L)	n/av	0		1	
CPRH	16	3	18.8	2	12.5
CPRL	13	n/av		n/av	
CPUO(L)	24	0	0.0	0	0.0
CSRL	27	21	77.8	17	63.0
CSRL(1)	17	8	47.1	4	23.5
CSUO(H)	58	2	3.4	0	0.0
DPUH	17	3	17.6	n/av	
DPUL	20	1	5.0	1	5.0
DPRO(L)	15	0	0.0	0	0.0
DSUH	48	3	6.3	8	16.7
DSUL	47	13	27.7	13	27.7
DSRO(H)	17	n/av		n/av	
Mean	26.4	4.4	18.4	4.3	18.1

Note: n/av = Data not available

Box 5: Time management at school X

School X is a high school located in a peri-urban township some 40km from a large metropolitan area. According to the sampling procedure followed by the evaluation, this is a high-performing school. It is also a public school on private property which is owned by the Catholic Church. School X was used to pilot the evaluation instruments and hence does not form part of the sample listed in Table 2. However, the following description is included because it offers a rare insight into what is quite possibly a common problem in the school system: responsible officials turning a blind eye or feeling powerless in the face of blatant disregard by schools of timetable requirements.

Teachers and HODs agreed that monitoring and support was provided by HODs and teachers were encouraged to attend training offered by the district, although no in-school CPD was offered. However, the effects of the extremely loose time management practices observed by fieldworks are likely to overshadow any possible beneficial effects of the reasonably well maintained instructional leadership regime by several orders of magnitude. For a start, the register was clearly not kept up to date. On both days of the visit, only four teachers out of 38 had signed by 10h00 and throughout the previous week, only eight had signed. However, prior to that, the register had been signed by most teachers, indicating that they update it periodically, but do not keep it up to date daily.

By far the most disturbing feature of the school concerns the attendance of teachers at school and in class. In direct contradiction of the fact that both the Mathematics and Mathematical Literacy teachers thought that these factors were very seldom or never a problem, four classes were unattended during Period 1 on both days of the school visit. After the noon break on day 1, one-third of classes were unattended, with learners standing around chatting and playing. At 13h00, the school closed because the Grade 12 teachers had to attend SmartBoard training; the rest of the teachers and learners went home. Over the two days, learners received around half of the teaching time allocated by the timetable.

Disturbed as those practices leave the observer, the attitude of the responsible official, the CM, towards this behaviour reveals the mechanism central to the maintenance of dysfunction, not only in this school, but as part of a dysfunctional sub-system. The school had been visited by the CM more than 20 times over the year, each visit discernible because the visitor wrote comments in the visitor's book and appended his/her title. There were also a number of visits on curriculum matters (at least 20). On one of his/her visits about six months prior to the evaluators' visit, the CM wrote a detailed description of many classes without teachers, learners roaming free and the school in a very dirty and unkempt state. Although the CM seemed upset by this situation, no action seems to have been taken and no change in these practices occurred. Part of the problem at this school is the fact that there has been no principal for over 2 years, with the two senior HODs taking it in turns to act as principal.

Q1.9 Is time optimally managed at classroom level?

This question is answered together with the other questions relating to classroom management and pedagogy (section 4.1.5).

Conclusion on time management at school level

Only five schools in the sample exhibited reasonably good teacher attendance rates in the last period of the first day and first period of the last day of the school visits (see **Table 16**). Teacher absenteeism was so rampant at four of the schools that it would not be surprising to learn that they lost up to half the time allocated in the timetable. From the evidence found at School X, it appears that district officials were aware of this situation, but felt powerless to institute more efficient ways of using time. The answer to Q1.8 is, therefore, that time management at the schools is extremely poor; and it appears that school principals and district level CMs are equally implicated in allowing this situation to continue.

4.1.5 Pedagogy

Q1.14 Do teachers exercise effective pedagogy in class?

Altogether, 35 secondary teachers and 22 primary teachers were interviewed and observed for a total of 96 lessons (Table 5). Using the method described in section 3.4.3, each lesson was characterised according to the 11 indicators of good teaching.

Table 17 shows the results aggregated by school level, district and performance. Scores indicating the quality of pedagogical practice on each indicator range from a low of 1 to a maximum of 4.

Table 17: Mean scores per school type on 11 indicators of good pedagogy

	School type	Number	Indicators of good pedagogy											TOTAL PED
			CK	PCK	Q tech	Q res	Mod ans	Prac	P&S	Diff	Time	Res	Behav	
All schools	Tot	96	2.6	2.1	2.5	1.0	2.2	2.0	2.1	1.7	2.7	2.1	2.6	23.5
	Tot Prim	61	2.5	2.1	2.4	0.8	2.0	2.0	2.2	2.0	2.8	2.3	2.6	23.6
	Tot Sec	35	2.8	2.0	2.5	1.5	2.4	2.0	1.9	1.3	2.5	1.8	2.6	23.3
Prim by District	A	9	2.8	3.3	3.1	1.4	2.3	1.9	2.9	2.8	2.6	2.3	2.6	28.0
	B	16	2.9	1.8	2.3	0.6	1.4	2.0	2.4	1.7	3.1	2.1	2.4	22.7
	C	18	1.4	1.9	2.1	0.6	1.6	1.6	1.7	1.4	2.3	2.2	2.3	19.1
	D	18	3.0	1.9	2.6	0.7	2.7	2.2	2.1	2.2	3.2	2.3	3.1	26.0
Sec by District	A	9	3.2	1.4	2.3	1.0	2.6	1.8	1.7	1.0	2.8	1.4	2.2	21.4
	B	9	2.3	2.0	1.8	1.2	2.4	1.9	1.4	0.4	1.4	1.2	2.4	18.7
	C	9	2.7	1.9	2.2	1.8	2.2	1.4	2.0	1.4	2.3	2.0	2.4	22.4

	School type	Number	Indicators of good pedagogy											TOTAL PED
			CK	PCK	Q tech	Q res	Mod ans	Prac	P&S	Diff	Time	Res	Behav	
	D	8	2.8	2.4	3.0	1.6	198	2.3	2.0	2.0	2.5	2.3	2.1	24.8
Prim by perform	**H**	21	2.4	1.7	2.1	0.8	1.9	1.6	2.0	1.4	2.7	2.4	2.1	21.1
	L	19	3.3	3.0	3.0	0.7	2.3	2.5	2.5	2.4	3.3	2.6	3.1	28.7
	O	21	2.1	2.0	2.5	0.8	2.1	1.8	2.3	2.1	2.8	2.1	2.9	23.2
Sec by perform	**H**	11	2.7	1.8	2.5	1.3	2.9	2.3	2.0	1.4	1.7	1.5	2.2	22.2
	L	12	2.9	2.3	2.5	1.3	2.5	1.8	1.8	1.3	2.5	2.2	2.9	23.8
	O	12	2.6	1.6	2.0	1.7	1.5	1.5	1.6	1.0	2.5	1.5	1.8	19.3

Key: A – D indicates the four districts; H – high-performing schools; L – low-performing; O – outlier schools;
CK: Has appropriate content knowledge; PCK: Has appropriate pedagogical content knowledge; Q tech: Uses appropriate questioning techniques; Q resp: Responds appropriately to learners' questions; Mod ans: Provides model responses; Prac: Provides adequate tasks for individual practice; P&S: Provides appropriate sequencing; Diff: Provides differentiated instruction; Time: Manages time efficiently; Res: Coordinates resources and space; Behav: Manages learners' behaviour.

From the relatively high scores of the entire sample on **Time** and **Behav**, it is evident that teachers manage time and learner behaviour relatively efficiently. At the same time, the relatively low figures for **Prac** (2.0) and **PCK** (2.0) indicate the learners are not set sufficient individual tasks to engage them fully, while teacher explanations of concepts and procedures lack clarity and detail. It is interesting to note that while **Q tech** scores highly (2.5), indicating that teachers ask questions a lot and spread them around the class, the score on **Q resp** (1.5) is low, signalling that teachers do not make the most of opportunities afforded by learner questions and responses to questions to correct misconceptions and build on existing knowledge; **Q resp** is the starting point for, and indeed the most important element of, formative assessment. Similarly, the low score on **Diff** (1.3) indicates that teachers generally do not differentiate between learners of different abilities in their classes, tending to adopt a one-size-fits-all approach.

In addition to scoring the individual indicators of good pedagogy, fieldworkers were also required to make a global judgement of the lesson on a 5-point scale: excellent, good, average, mediocre and very poor. These measures were also assigned ordinal variables 4 through 0, respectively. This step introduced further sources of unreliability since, training notwithstanding, fieldworker judgement is still likely to vary within the group. Nonetheless, the notion of a global judgement was motivated by the possibility that the disaggregation of the lesson into the 11 indicators might obscure the overall quality of the lesson.

Correlations between fieldworker judgement and the indicator scores from

Table 17 revealed a relatively close association between fieldworker judgement and three of the indicators: Total Pedagogy (0.52) (indicating a certain level of consistency between the global and disaggregated judgements made by fieldworkers), Prac (0.51) and PCK (0.48) (**Table 38**). If global fieldworker judgement is a valid measure of lesson quality, then these results suggest that the building of teacher PCK and providing learners with opportunities to practice tasks themselves are fruitful routes to improving the quality of teaching and learning.

Lesson types

The global lesson judgements exercised by fieldworkers clustered around average to good (**Table 18**).

Table 18: Pattern of global lesson judgements

Quality as judged by observers	Number of lessons
Very poor	1
Mediocre	13
Average	40
Good	37
Excellent	5
Grand Total	**96**

In reality, it is likely that these judgements of quality are relative to modal practices within this particular sample, which comprises Quintile 1-3 schools. If Quintile 4 and 5 schools were to be added to the mix, then the pattern shown in **Table 18** is likely to be shifted toward mediocre and very poor. Nevertheless, a good deal of competent teaching was seen. The field notes made in regard to a Grade 10 Mathematics lesson judged as excellent are reproduced in **Box 6**.

Box 6: A G10 maths lesson classified as excellent

The teacher is DSUH-2 working at an urban, high-performing secondary school in District D. His score on the Mathematics test was 68% (see section 4.2). The lesson was about drawing graphs of and making inferences from parabolic and hyperbolic functions. Only exercise books were used and each learner had a copy.

The lesson was judged as excellent by the fieldworker, confirmed by a very high total pedagogy score of 41. Scores on the 11 indicators of good pedagogy were as follows:

CK	PCK	Q	Res to Q	Model	Prac	P&S	Diff	Time	Res	Behav
3	4	4	4	4	4	3	4	4	4	3

The fieldworker described the lesson, providing time intervals for each new activity as follows:

0-10 min: For the first 10 minutes, the teacher walked around the class checking whether learners had done their homework and it was clear that many had not.

10-18 min: One learner was designated to write the first homework example on the chalkboard. The teacher then wrote the solution to the second homework problem – drawing a parabola – on the board, explaining each step as he went, and asked questions of learners to check that they were following and understood what he was doing. The fieldworker observed that only about half the class seemed to be following, although all were writing the corrections in their exercise books.

18-30 min: The teacher went through a quick revision of the parabola and hyperbola and set learners the task of drawing the graph of y=4/x, demonstrating how to find several co-ordinate pairs using a table and how to draw and label the axes. Learners used the co-ordinate pairs to plot the graph. The teacher explained how to derive the asymptotes and drew the graph on the board.

30-50 min: The teacher set the task: Sketch the graph of y=-4/x. Learners worked on their own to draw the axes, derive co-ordinate pairs and the asymptotes and sketch the graph, while the teacher walked around to assist individuals. The fieldworker commented that most learners could derive co-ordinate pairs, but struggled with the asymptotes.

The teacher set the task: Sketch the graph of xy=2. Once again, the teacher walked around giving individual support and then did the example on the chalkboard while learners marked their own work. The fieldworker noted that this worked well and that learners were clearly well drilled in this method of presentation.

50-60 min: The teacher then set the task: Draw the graph of xy=2 if the domain is restricted to the region where x>0. This introduced a further conceptual dimension to the topic. Learners worked individually to derive co-ordinates, calculate asymptotes and draw the hyperbola. The teacher provided less scaffolding for learners as they did this example on their own. Most learners managed well.

In motivating his judgement of the lesson as excellent ,the fieldworker said: *This was a carefully planned, logically structured lesson that was conducive to effective concept development. The teacher managed the large class size and small classroom well. Concept development was well scaffolded; this created a safe learning environment. The teacher exhibited a good relationship with learners, firm, but fair. It was clearly evident that learners are expected to work hard.*

Principles of the NCS

The seven principles on which the NCS is based are: social transformation; active and critical learning; high knowledge and high skills; progression from simple to complex; human rights, inclusivity, environmental and social justice; valuing indigenous knowledge systems; and credibility, quality and efficiency. The second of these – active and critical learning – are evident in the lesson outlined in **Box 6**, with learners engaged, through reading, writing and discussion, with the topic at hand, which is pitched at the right level of the curriculum. However, as discussed above, the indicator **Prac** was one of the lowest scoring indicators across all the lessons observed (

Table 17). It can be argued that, judging from the country's poor record on international comparative tests, there is room for much improvement on the third principle – high knowledge

and high skills – although there are encouraging signs that this is improving. The fourth principle – progression from simple to complex – is represented by the indicator **P&S**, which was also a relatively low scoring item in

Table 17.

Fieldworkers were instructed to watch specifically for three of the principles not reflected directly in the 11 indicators of good pedagogy – social transformation, human rights and indigenous knowledge systems. They found a total of 39 examples of these principles across the 96 lessons observed, distributed as shown in **Table 19**.

Table 19: Manifestations of curriculum principles observed in lessons

Social transformation	Human rights	Indigenous knowledge systems
5	24	12

A short excerpt from an EFAL Grade 2 lesson seen in school CPRL illustrates the kind of example identified by fieldworkers (**Box 7**).

Box 7: Incorporation of human rights into a lesson at CPRL

An EFAL lesson, characterised as mediocre by the observer, centred around a cartoon showing a traffic officer presenting a motorist with a fine and saying: *'I'm Father Christmas and I'm giving you a R500 fine*'. The motorist shows anger towards the traffic officer. As part of the class discussion, the teacher pointed out that everyone should treat others with respect, rather than venting their frustrations. The fieldworker interpreted the attitude of the teacher as defending human rights in a complex situation.

Q1.16 Are FP teachers using an effective method for teaching literacy?

Some 40 Grade 2 language lessons, including in EFAL and HL, were observed in the 12 primary schools visited. These covered a range of topics: Phonics, Listening and speaking, Days of the week, etc. However, there was insufficient focus on Reading to provide sufficient evidence to answer Q1.16. Besides, it would require a more sustained observation of individual teachers, over a period of days, in order to ascertain whether all the elements of an effective method for teaching Reading were in place. Nevertheless, valuable insights on pedagogy in general were derived from the classroom observations, as described above.

Conclusion on teachers' pedagogic practices

On the question of pedagogy, it is evident that teachers managed time and learner behaviour relatively efficiently in their classes. However, learners were not set sufficient quantities of individual tasks to engage them fully, while teacher explanations of concepts and procedures generally lacked clarity and detail. Furthermore, while teachers asked many questions and spread them around the class, they did not make the most of opportunities afforded by learners' questions and their responses to questions to correct misconceptions and build on existing knowledge. Similarly, teachers generally did not differentiate between learners of different abilities in their classes, tending to adopt a one-size-fits-all approach.

Regarding the seven principles on which CAPS is based, the evidence is as follows: Only five examples of *social transformation* were observed in the 96 lessons viewed, although this principle is difficult to define and thus open to a wide variety of interpretations; furthermore, it is far less likely to be manifest in Mathematics and Mathematical Literacy lessons than in

Language classes. The pedagogic indicator **Prac** (individual learners engaged in reading, writing or speaking tasks) was taken as an indicator of the principle *active and critical learning;* the fact that it was one of the lowest scoring indicators across the lessons observed indicates that it was not strongly manifested in these classrooms.

The country's relatively low scores on international comparative tests are taken to indicate that the principle *high knowledge and high skills* is not being achieved to anywhere near the desired extent. Similarly, low scores across the lessons observed on the indicator **P&S** (progressively introduce new learning) suggest that the principle *progression from simple to complex* is not being achieved. In contrast, the principle *human rights, inclusivity, environmental and social justice* was recognised in a quarter (24 of 96) of the lessons, making it the most frequently observed of the seven principles.

In contrast, *valuing indigenous knowledge systems* was seen in only 12 classes. Finally, the principle *credibility, quality and efficiency* is also difficult to define and hence to recognise in individual lessons; this is probably best interpreted as an overarching measure of the quality and efficiency of the system which, as we argue in sections 5 and 6 below, are not strong features of South African schooling as a whole, and of the subsector comprising Quintile 1-3 schools in particular.

4.1.6 Infrastructure and non-cognitive resources

Q1.10 Are the minimum human resources and infrastructure available at schools?

All primary schools in the sample, except one, reported having an unfilled vacancy for a FP teacher (**Table 20**). Similarly, most high schools reported missing one teacher each for EFAL, Mathematics and Mathematical Literacy. These figures seem high, although they may be the results of austerity measures imposed in the face of the current economic downturn, necessitating a freezing of new appointments.

Table 20: Vacant teaching posts

FP	FET – EFAL	FET – Maths	FET – Maths Lit
11	10	11	10

In six of the schools, furniture was in a poor state; and in a further nine schools, there was some furniture which was not well cared for (**Table 33**). In 12 schools, buildings and grounds were in a mediocre to poor condition and in 10 schools, the toilets were not hygienic. District A, the most rural, seemed to be worse off regarding basic infrastructure compared with the districts in the other provinces, with District D coming in close behind. Primary and secondary schools did not differ much in terms of infrastructure provision and maintenance, nor did high- and low-performing schools.

4.2 Question 2

Q2.1 Do teachers have the language skills needed to teach effectively?

This question is answered under the response to Q2.2 below.

Q2.2 Do teachers possess adequate levels of content knowledge to implement CAPS?

Three tests were constructed to measure the content knowledge of Grade 2 teachers in Mathematics and English and Grade 10 teachers in Mathematics, Mathematical Literacy and English. The items were drawn from larger tests constructed by JET and widely used to assess teacher knowledge in schools across the country. Given the large amount of data collected in

each school, each test was designed to be completed in no more than an hour, although a knowledgeable teacher was likely to have completed each in a quarter to a half of this time.

Two caveats apply to the interpretation of the test scores produced. First, the items were not standardised, benchmarked to the curriculum or designed to measure particular constructs, but consisted of typical problems encountered in the IP or SP curricula, respectively. Thus, for example, because teachers scored poorly on the item 53.03 x 100 does not necessarily mean that they do not understand the concept of place value. The second caveat derives from the small sample sizes, around 22 teachers per test at Grade 2 level and around 12 for each Grade 10 subject. Because of the small, and unrepresentative sample, no conclusions can be drawn with respect to any sub-group, let alone the South African teacher population.

However, the test results do confirm the findings of other research studies of teacher content knowledge, as summarised in the Literature Review above (section 3.9.4).

Grade 2 teacher scores: Mathematics and English

Except for schools APRH and APRL, where only one teacher per school was tested, two Grade 2 teachers from each of the 12 primary schools sampled wrote both the English and Mathematics tests, giving a total of 22 teachers tested.

Detailed results by item are given in Table 42 and Table 43. Five teachers scored 60% or higher on the English test and three achieved this benchmark on the Mathematics test. Fourteen scored lower than 50% in English, while 16 scored lower than 50% in Mathematics. Five and 13 teachers, respectively, scored below 40% in English and Mathematics. The results are summarised in

Table 21. Accepting that the minimum knowledge required for teachers to be in a position to convey curriculum content to learners would be indicated by a score of 60%, the test results showed that 17 of these teachers did not know enough to teach English and 19 had an insufficient grasp of elementary Mathematics to be in a position to teach that subject effectively.

Table 21: Grade 2 teacher scores on English and Mathematics tests (per cent)

School	Teacher	English		Maths	
		Teacher scores	District Mean	Teacher scores	District Mean
APRH	APRH-1	38	51.25	35	40
APRL	APRL-1	62		35	
APUO(L)	APUO(L)-1	48		45	
	APUO(L)-2	57		45	
BPUH	BPUH-1	48	55.5	40	41.7
	BPUH-2	71		25	
BPUL	BPUL-1	71		50	
	BPUL-2	43		60	
BPRO(H)	BPRO(H)-1	57		50	
	BPRO(H)-2	43		25	
CPRH	CPRH-1	19	36.7	5	28.3
	CPRH-2	48		60	
CPRL	CPRL-1	43		30	
	CPRL-2	43		35	

School	Teacher	English		Maths	
		Teacher scores	District Mean	Teacher scores	District Mean
CPUO(L)	CPUO(L)-1	10		20	
	CPUO(L)-2	57		20	
DPUH	DPUH-1	43	47.7	50	38.3
	DPUH-2	33		25	
DPUL	DPUL-1	14		25	
	DPUL-2	48		25	
DPRO(L)	DPRO(L)-1	67		15	
	DPRO(L)-2	81		90	
Mean		**47**		**37**	

The district mean scores cannot be considered to be significant, given that the scores of six teachers cannot reflect the state of knowledge of hundreds or thousands of teachers in the district.

Some of the easier items in the Mathematics tests which were done poorly by the teachers tested included the following:

> Calculate 53.03 times 100? – only six of the 22 teachers answered this question successfully.
>
> Express 0.4 as a fraction in simplest form - only one teacher could answer this.

The item on which teachers performed best involved reading data off a simple bar graph representing the number of days in a year which reflected different weather conditions. Even the most difficult question on this item was correctly answered by nine teachers:

> Did they record the weather conditions for every day in 2008?

However, only one teacher could explain his/her answer to the previous question (the answer is 'No' and the reason is that the number of days represented in the graph do not add up to 365). This is the closest any item came to assessing PCK and as experience has shown (see Bowie, 2015), teachers generally find such items more difficult than straight content knowledge questions.

The English test was based on a short extract from Nelson Mandela's *Long Walk to Freedom.* Only five of the 22 teachers tested could identify the main idea in the given paragraph. The item which was most poorly answered involved writing a four to six sentence description of a family member, following a rubric. The mean score out of 10 was 4.4, indicating the very low ability of these teachers to write even a short paragraph in English.

Grade 10 teacher scores, English

Grade 10 teachers of EFAL wrote the same test as the Grade 2 teachers. Their scores by item are detailed in **Table 44** and summarised in **Table 22**.

Table 22: Grade 10 English teacher test scores

Code	Score (max 21)	Percent	District Mean
ASRH-1	16	76	72.7

Code	Score (max 21)	Percent	District Mean
ASRL-1	15	71	
ASUO(L)-2	15	71	
BSUL-2	14	67	43.0
BSRO(L)-2	4	19	
CSRL(1)-2	9	43	
CSRL-3	10	48	38.3
CSUO(H)-2	5	24	
DSUH-1	15	71	
DSUL-3	19	91	81.0
DSRO(H)-1	17	81	
Mean	**13**	**60**	

Although significantly better than the scores produced by the Grade 2 teachers, with two exceptions, Grade 10 teachers' results were also very disappointing. In particular, the poor writing ability in English of Grade 10 teachers is noteworthy, with the teachers achieving a mean score of 5.5 out of 10 on the simple descriptive writing task.

Although the district averages differed markedly, these must be viewed with caution, given the small sample sizes and large variations exhibited by teachers within each district.

Grade 10 teacher scores, Mathematics

The Mathematics test consisted of a graph, arithmetic calculations, simple geometry questions and one item on Probability. All the items were drawn from the SP curriculum, although many were within the capacity of primary school learners. Detailed responses by item are shown in **Table 45**, while the total scores for each teacher are summarised in Table 23. Competent teachers of Mathematics should have achieved at least 70% on this very simple test, a threshold achieved by only four of the 12 teachers tested.

Table 23: Grade 10 maths teacher test scores

Teacher Code	Total correct (max 25)	Percent	District Mean
ASRH-2	8	32	
ASRL-2	5	20	38.7
ASUO(L)-1	16	64	
BSUH-1	23	92	
BSUL-3	18	72	61.3
BSRO(L)-3	5	20	
CSRL(1)-3	18	72	68.0
CSUO(H)-3	16	64	
DSUH-2	17	68	
DSUL-2	17	68	72.0
DSRO(H)-2	20	80	

Teacher Code	Total correct (max 25)	Percent	District Mean
Not coded	11	44	
Mean	**14.5**	**58**	

Grade 10 teacher scores, Mathematical Literacy

Mathematical Literacy teachers wrote the same test as the Mathematics teachers. The results are detailed in **Table 46** and summarised in **Table 24**.

Table 24: Grade 10 Mathematical Literacy teacher test scores

Teacher Code	Total correct (max 25)	Percent	District Mean
ASRH-3	12	48	34.7
ASRL-3	7	28	
ASUO(L)-3	7	28	
BSRO(L)-1	6	24	38.7
BSUH-3	14	56	
BSUL-1	9	36	
CSRL(1)-1	9	36	51.0
CSRL-1	12	48	
CSRL-2	15	60	
CSUO(H)-1	15	60	
DSRO(H)-3	18	72	56.0
DSUL-1	10	40	
Mean	**11**	**45**	

Predictably, teachers of Mathematical Literacy did worse on the test than Mathematics teachers, scoring a mean of 45%, with only two teachers achieving 60%. The test consisted largely of the kind of arithmetic operations which form the foundation of Mathematical Literacy, indicating that most of these teachers did not possess the knowledge and skills required to teach this important subject.

Q2.3 Do teachers possess adequate levels of PCK to implement CAPS?

This question is answered in the section on pedagogy commencing on page 61.

Conclusion on teachers' knowledge and skills

The large majority of teachers tested did not possess adequate levels of content knowledge. This must place an absolute limit on their ability to convey curriculum knowledge to their learners. An extended discussion on Question 2 commences on page 89 below.

Q2.4 Do teachers understand the requirements of CAPS re planning, activities, LTSM, assessment?

Six of the 13 interviewees at national level thought that teachers did understand CAPS requirements, while one interviewee said that about 25-30% understood. Five said that 'some'

teachers understood, but had some reservations. Of those who responded negatively, one thought that *teachers know what has to be done but need support in managing things*, and another commented that: *Teachers are very mechanistic about the curriculum; [they have a] tick-box attitude towards curriculum. Minimal requirement[s] are not being met at the moment.*

At provincial level, 10 of the 16 curriculum officials said 'yes' to this question. Similarly, in five of the nine district level interviews, respondents thought that teachers understood CAPS requirements; and in a further two, respondents thought that at least the majority understood. However, it seems that these views were based on assumptions, rather than empirical evidence. For example, in one interview, it was said that teachers understood CAPS … *because they had been trained*', while in another interview one respondent commented that teachers understood '…*because it stipulates clearly what is to be taught, when and how much*.

There was general agreement across all levels that, comparatively speaking, CAPS provides clearer guidance to teachers, compared with C2005 and the revised NCS; for most respondents, the reason in this regard is that CAPS specifies the content and assessment requirements.

One district level respondent echoed the widespread support of educators (expressed in various forms in a number of interviews at all levels) for in-service training: there seems to be a belief that, with appropriate CPD, teachers' problems relating to implementing the curriculum would be solved. Often this view is coupled with scepticism about the value of university teacher education: *Yes [they understand CAPS] when they are taken through it, but they don't avail themselves for sufficient training…. New teachers have many gaps; are the universities aware of CAPS and training teachers to use it?*

Q2.5 Do teachers have the capability and motivation to deliver the curriculum

Only four of the 13 national level respondents were unconditionally sure that the majority of teachers had the capability to implement the curriculum. Of the respondents that said 'some' teachers had the capability, a number thought that this was conditional on strong support in the form of coaching and scripted lesson plans. At provincial level, a more optimistic picture emerged, with 12 of the 16 respondents agreeing that the teachers had the necessary capabilities to implement CAPS.

On the question of motivation, most respondents, at both national and provincial levels, thought that this was even more of a problem than teachers' capability to teach the new curriculum. Thus, at provincial level, 10 of the 16 respondents said that teachers lacked motivation, collectively citing the following reasons: CAPS is overloaded, containing too much content; it requires too much administration from teachers; assessment presents a problem; subject knowledge is lacking; and learner ill-discipline makes teachers' lives difficult. At national level, one interviewee expressed the feeling of others, saying that *there is a negativity about the profession*. Similar sentiments were expressed at district level, with curriculum leaders across the board identifying content gaps on the part of teachers as a major inhibition to effective teaching.

The twin themes of relying on CPD, while disparaging ITE, came through from District A: *With FP we can't guarantee, because the majority of our teachers have been trained through distance learning and properly trained teachers are retiring. The new teachers can't handle CAPS. But DBE is trying, by training SAs, so we hope things are happening*. The same sentiment was expressed even more strongly in District C: … *we are struggling with … those fresh from university, who know nothing about CAPS. Let's not even mention PGCE and PDE. And at UNISA they just write assignments, which may be written by someone else. One has a very fancy BEd but she doesn't understand the subject. Closing the colleges was the biggest mistake.*

Again, poor teacher motivation was cited as a feature: *They take any opportunity to do something other than their job. Unionisation is a factor: any innovation has to be negotiated before teachers accept it. Learner discipline has become a major factor: during strikes they even attack teachers and stone their cars*.

4.3 Question 3

Q3.1 What are the support systems to implement CAPS and how should they work?

Evaluation Question 3: *Are the support systems to support CAPS implementation working?* goes to the heart of the TOC summarised in Figure 2. This embraces a network of interacting influences which support teachers to deliver the curriculum, a number of which are addressed in other parts of this report. The discussion below focuses on the following support systems in particular: the supply of CAPS documents to schools and teachers; the role of district level support, specifically in the form of subject advisory services; the delivery of CAPS training programmes; and the maintenance of a coherent instructional leadership programme at school level, including CPD.

Q3.2 Are CAPS documents readily available to teachers?

Not all teachers in the sample reported having access to all of the core documents for CAPS, namely: the CAPS document for the subject/s and grade/s they teach; the *National Policy on Programme and Promotion Requirements for NCS*; and the *National Protocol for Assessment* (Table 47). Of the 57 teachers interviewed, 51 (89%) reported having the CAPS curriculum document for their phase and subject(s). Far fewer said they had the *National Policy on Programme and Promotion Requirements for NCS* (23 or 40%) or the *National Protocol for Assessment* (21 or 37%).

In District A, all of the teachers interviewed in the primary school sample had access to all three documents. Of the secondary school teachers in the district interviewed, only one did not have the CAPS document, but access to the other two documents was very limited. District D also stands out because all of the teachers interviewed in this district had access to the CAPS curriculum document, although, in this district too, access to the *National Policy on Programme and Promotion Requirements for NCS* and the *National Protocol for Assessment* was more limited.

In contrast, at one school in District B (BPRH), none of the teachers interviewed knew if they had access to any of the three main documents. Not only does this reveal ignorance of the core documents necessary for the implementation of CAPS and the delivery of the National Curriculum, it raises serious questions about what informs curriculum delivery for these teachers. In the absence of key information for CAPS, it is hardly surprising that the HOD interviewed said CAPS was not easy for teachers to understand in any of the subjects.

Q3.3 Are the LTSM required by CAPS available to teachers and learners?

This question is addressed under in the discussion on LTSM commencing on page 48.

Q3.4: Is the quantity and quality of curriculum support provided by District officials adequate?

This question elicited mixed responses, both within and across levels of the system, although there was general agreement that not all support systems were working as they should. For one national level manager, poor use of time undermined the benefits of support to schools: *[there is a] general lack of culture of teaching and learning in the large majority of schools: they don't start and close on time, and in between don't adhere to CAPS requirements*. This was echoed in District D, where the problem of teacher attitudes came up again, with SAs claiming to make a difference in some schools, but not across the board: *A lot of this comes down to teachers not being what they used to be. The inspectors worked, teachers really got*

their work up to date in prep, but nowadays teachers don't take them seriously, because of the slogan 80% support, 20% compliance.

Union activity was also quoted as being a problem in District A: *A lot of union activity … disrupts us going to schools*.

Are subject advisors doing a good job?

National level respondents did not exhibit a favourable view of the majority of SAs. This attitude was well expressed by a very senior manager as follows: *Some are not capable, [they were] wrongly appointed; they landed there by mistake. … some of whom don't have a clue about their subjects*.

In contrast, 12 of the 16 provincial level respondents thought that SAs were doing a good job, which is perhaps not surprising given that many of these respondents are former SAs or senior managers who supervise the work of SAs. However, even in this instance there were some reservations expressed: *But they are too thinly spread and unable to mentor and guide teachers as expected*.

District level interviewees agreed with their provincial counterparts that SAs were acquitting themselves well, but cited a number of constraints, the most common being that there are too few of them to cover the schools in the district, many have too many subjects to supervise, of which they are only specialised in one or two; and in a number of provinces, a paucity of transport subsidy inhibits them from visiting schools. Another complaint was that SAs were frequently diverted to undertake additional tasks (e.g. monitor exams and school functionality, provide CPD and organise PLCs, provide community support and go to Pretoria to help with materials development) which take them away from their core business, which is curriculum support. One SA in District C put it this way: *[This is] fruitless expenditure because we are taken for another programme before we can start implementing. We are the runners in the district*.

Are we selecting the right people?

There is wide agreement, across national, provincial and district levels that, while some excellent SAs were being appointed, by and large the process did not take account of the specific expertise required for the job and was often subject to interference by unions and other interest groups. As a result, many people appointed were not suitable. Stating the obvious, one DBE curriculum leader said: *A subject advisor for Mathematics should have been a teacher for mathematics. If it's the FET, you should be teaching in the FET and should be teaching Mathematics and have a qualification, a post graduate qualification or equivalent in the subject so that you are grounded in the subject because the purpose of the responsibilities of the SAs will be to assist schools in providing guidance on a higher level within a particular district*. Another added: *In the classrooms they must be able to do monitoring and mentoring.*

How can subject advisors best support teachers?

On the question as to which form of support to schools is most effective, respondents mostly agreed that face to face interaction with teachers is important and that workshops assisted in communicating with teachers, since SAs were not able to visit schools often enough. However, when asked about the most effective forms of teacher support, a common view, expressed in one form or another by respondents in all four districts, was that the afternoon workshop modality is not effective: *Yes [we are making a difference], but time for intervention is too short: they come to workshops late and leave early to catch transport. But you can see the improvement. If we had a full day they would do better.* In District A, the FP SAs were using holiday time to engage with teachers: … *they weren't very willing but they were excited when they came back because they gained a lot*. SAs felt that more holiday work would be highly beneficial, but that it posed practical difficulties, including the costs and teacher resistance to working during their holidays.

It was notable that in most interviews, when asked about factors that hinder their work, SAs complained about issues outside of their control, such as a lack of resources, inadequate ITE and poor teacher attitudes, although one respondent in District B made the following observation: *But teachers rely too much on support, they don't take responsibility. Also, there needs to be dialogue between teacher trainers in the universities and schools and mentor teachers*.

SAs were unanimous that increasing the number of SAs and increasing transport subsidies are vital to enabling more school-based supervision and support. But this would have huge budget implications and also drain expertise from schools. Expectations concerning what SAs are expected to do, shared by SAs themselves, are on a collision course with the resources required to enable such activities. SAs consider their most important intervention to be to support teachers in their classrooms; however, given the number of SAs per school (in some cases 1/200), no SA could visit every teacher in all the schools under her jurisdiction more than once in three years, no matter how efficient. Cuts to transport subsidies in recent years have further hampered travel to schools. It seems clear that the DBE and the provinces need either to rethink the role of SAs, or to drastically increase staff post provisioning to districts and/or circuits for subject support services. The former would seem to be the obvious path to take, certainly under present economic circumstances, but possibly under all conditions. Adequate fuel subsidies to support school visits should be provided, whichever model is followed.

Are there problems regarding the appointment of people to school-level promotion posts?

One national level respondent summed up a sentiment expressed a number of times in interviews at all three systemic levels when s/he argued out that the application of inappropriate promotion practices is part of a system-wide institutional culture: *[There is a] combination of nepotism and lack of capacity of leadership, in choosing the wrong people. … Most schools don't have positive role models. Young graduates are swallowed into the existing school culture.*

Regarding the selection of principals, SAs in District A thought that the problem lay more with the inability of principals to act as leaders when appointed, rather than with the selection criteria: *The paper criteria are correct, but they don't act as managers when appointed. They think it's just a promotion to get money, they are not passionate*. Yet respondents also thought that the criteria were not applied impartially: *We don't do impartial selection, but choose people because of other factors, honouring people because of factors other than being good educators, such as allegiances*.

The last assertion was supported in all four districts; in District B, for example: … *political interference is very widespread across the province and the country*., and in District D: *… same problems as for HODs; also Deputy Principals. KPAs need to be revised, made more specific to the particular job*.

If there is a problem with promotion processes, what are you doing about it?

A general sense of powerlessness was exhibited in response to this question. One national level respondent spoke for many at all levels when he said: *This is a political problem: it's a question of what our roles are in education. We have allowed the situation where the tail wags the dog: managers must be left to manage, but people who are supposed to be observers are calling the shots*. Another said: *We should focus on expertise, but this is not happening*.

The same sense was reflected at provincial and district levels. While some of the respondents had no suggestions regarding this question, others responded that they were not in a position to do anything about it, or had no control over it. One respondent in District C felt helpless: *We are stuck with this system because of the unions. It's a chamber decision. [We can do] nothing*

at present. Another from District B suggested: *Put in systems of accountability for HODs; IQMS doesn't work*. A third respondent from District D supported this view: *Strengthen consequence management, everybody should account. At times this is not done. There is a growing realisation that we can't continue like this, that we need to appoint the best people for the job. We don't have the power*.

Q3.5 Are training programmes in the use of CAPS for educators appropriately designed?

This question was indirectly examined through the views of educators and is answered together with Q3.6.

Q3.6 Was CAPS training well delivered?

With specific respect to the training which accompanied the introduction of CAPS, teachers, HODs and principals were asked if they had received training on the following topics: Principles of CAPS, Content Knowledge, Methodology, Assessment, Analysis of Assessment, Management Training (principals only). The questions focused primarily on whether or not training had been received, its duration and subject matter.

In addition to these specific questions about CAPS training, a wider view of CPD was adopted in order to develop a better understanding of the great deal of activity occurring in this regard throughout the system. In pursuit of this aim, systems-level managers were asked about the nature, extent and quality of CPD within their respective areas of activity.

SMT members

All members of the SMTs interviewed at the sample schools had attended CAPS training. However, there were significant gaps in the training on the Principles of CAPS, with 10 of the 24 principals and six of the 36 HODs not having received training. There were also significant gaps in training for HODs on the Analysis of Assessment Data (6/36), while principals had notable deficits in Management Training (8/24).

Teachers

There were also significant shortfalls in the training provided to both primary and secondary school teachers throughout the sample. Three of the 22 teachers interviewed in the primary sample had not attended any in-service training on CAPS. For those that had attended, the biggest deficit was in the analysis of assessment data, with almost three-quarters (14) of those interviewed having not received any training. There was also a notable shortfall in training on the Principles of CAPS (8), as well as gaps in Content Knowledge (5), Assessment (4) and Methodology (3).

A high proportion (12/35) of the secondary school teachers interviewed had not participated in any in-service training on CAPS. District A and District C had the highest number of teachers who had not received any CAPS training; at CSRH, this was the entire sample of teachers. Meanwhile, all of the teachers in District D had received training on CAPS and at DSRH, all of the topics had been covered for all teachers interviewed. Among high school teachers who had received training, a significant proportion had not attended any sessions on the Analysis of Assessment (11) or the Principles of CAPS (7); followed by gaps in training on Content Knowledge (4), Assessment (4) and Methodology (2).

Views of system level leaders

What is the state of teacher knowledge?

There is consensus, across national, provincial and district levels, that many teachers exhibit poor levels of subject content knowledge and that this is a major contributor to poor learner performance. A number of respondents mentioned that PCK is as essential to good teaching

as content knowledge and that PCK is just as weakly developed among teachers. There are particular shortages of qualified teachers in Mathematics, Science and African languages.

For one senior DBE official, these shortcomings pointed to a problem of initial teacher education (ITE). Another official from the DBE explained it as follows*: I have come to realise that most teachers are qualified, but one can't readily see the correlation between learner output and teacher qualifications. We need to improve PCK of teachers, not too much content, and especially high level content. But the big gap is PCK.*

For a third DBE respondent, the problem lies at the door of poor school management, resulting in conditions not conducive to teaching and learning. However, as noted previously, for the majority of respondents, CPD is seen as the answer to the gaps in educator knowledge, not only for teachers, but for SAs and even members of the DBE. One DBE respondent put it this way: *Development of SAs is neglected; even DBE officials need development, conferences, etc.; knowledge doesn't stand still*.

These views were echoed at provincial level, where 13 of the 16 respondents agreed that there was a subject content or method problem, or both, on the part of teachers. When asked about the CPD needs of teachers, respondents in all 4 districts agreed that many teachers lacked content knowledge, with interviewees in District D adding that this was more of a problem in high schools.

Two of the interviews in District A revealed a generally dystopian view of current ITE, coloured with a nostalgia for a time past, when teachers were properly trained in colleges; distance education and the National Professional Diploma in Education (NPDE) qualification were particularly disparaged[9]. This was accompanied by a poor view of teachers' capabilities and motivation: *They are lazy to read so they can't gain more by self-study.* This feeling was shared by many in District B, where one respondent expressed the point as follows: *Content [knowledge is lacking], but more than that its attitude: teachers are often not prepared. You can work with a person lacking content or method [but you can't work with someone with a negative attitude].*

In one interview in District A, the question of the Integrated Quality Management System (IQMS) was raised and the view expressed that it *… does not give us the proper indicator, it is not done to the letter. To teachers IQMS is more of a money-making tool than a mechanism for development; they give themselves high scores because they want the money and are not interested in development. And teacher development is not necessarily informed by IQMS*.

Is there a Literacy strategy in place?

Apart from three who work in the FET Phase, all senior managers interviewed in the DBE agreed that there is a literacy strategy for primary schools and that it has two foci: one for Reading promotion and the other for Language improvement, covering Grades R to 12. For one senior manager, the programmes are working, as indicated by the latest SACMEQ results; he attributed this success to the Lit/Num interventions of the DBE, coupled with the ANA. In terms of Reading promotion, the Workbook Project in Mathematics and Languages was cited as a major support to teachers. The Language Improvement Plan is promoting both the LOLT and English across the curriculum. There is also a programme for EFAL and one for the Incremental Introduction of African Languages (IIAL), with a pilot started in 2014/2015.

Provincial level respondents were far less knowledgeable when asked about the presence of a Literacy strategy, with eight of the 16 unable to answer. Seven of the eight who did know about a Literacy programme in the province were not able to identify it by name, could not elaborate on how it was being implemented, or whether teachers were using it in classrooms.

[9] At the time of the visit, the district was in dispute with a significant number of disgruntled NPDE holders on the grounds that the district was discriminating against them because of their qualifications.

The remaining respondent provided considerable detail on these questions, mentioning the Certificate in Primary English Language Teaching (CIPELT), Certificate in Secondary English Language Teaching (CISELT); Early Grade Reading Assessment (EGRA); IIAL, the use of ANA exemplars, teachers being trained in the use of SBA and LTSM, Drop All and Read (DAR), the Lit/Num Strategy and Language Across the Curriculum (LAC).

In all four districts, there was agreement amongst SAs in the FP that reading was being taken seriously in primary schools. When pressed for details about the content of such initiatives, it was common for educators to describe their 'programme' as a list of isolated events, including reading clubs, essay competitions, spelling bees, Rally to Read, and newspaper inserts. Activities of this kind may stimulate reading, once children are able to master a threshold level of fluency. The great problem in South African schools, however, is that by Grade 5, the majority of learners have not reached this threshold and a much more fundamental programme is required[10] in addition to the kinds of stimulating activities listed above.

EGRA, currently being piloted in a number of schools, was cited in three district interviews as making a difference. This is encouraging, given the key role that instruments of this kind can play in focusing the attention of teachers and their supervisors on the essence of Reading: the ability by individual children to make meaningful connections between marks on the page, sounds in the mouth and thoughts in the brain.

SAs are of the view that the key factor inhibiting the systematic application of Reading Fundamentals is teacher incapacity: …*the teachers themselves are not readers, so they can't translate a passion for reading to their learners*. Another inhibiting factor mentioned was the shortage of reading material, both at home and school. In regard to the latter, appreciation for the DBE workbook initiative was mentioned by a number of respondents.

One respondent in District D raised an issue that is frequently expressed by teachers, but is perhaps too sensitive to form part of the public debate about Language, which is the use of Mathematical terms in African languages in the FP: *Languages are a challenge: learners come to school with many languages and they have to learn in SiSwati; also many teachers don't know SiSwati. Maths is taught in SiSwati and we don't have vocabulary. Why don't we stick with English terms? The SiSwati numbers are too long. When they go to the shop the say Ten Rand. It's not working to teach them in SiSwati; we should do Maths in English; they see it on TV, everywhere. So they have to learn these numbers in FP and change again to English in Grade 4. As much as we love our language, it's not working. We are not doing justice to our learners'*.

Is there a Mathematics strategy in place?

Senior system level managers in DBE responded positively to the question as to what is being done about improving the quality of Mathematics teaching. A great number of initiatives currently in motion were mentioned, the most common being the 1 + 4 programme launched in 2015. Others included the Mathematics, Science and Technology workbooks and textbooks for Grades 8 to 10 funded by SASOL Inzalo, the development of a comprehensive Mathematics/Science/Technology (MST) strategy from Grades R to 12, the Japan International Cooperation Agency (JICA) teacher development programme targeting problem-solving at the FP and IP levels and the Gauteng Primary Literacy and Mathematics Strategy

[10] For example, in the United States, the National Reading Panel, following a survey of 'high quality' research into reading programmes which have proved to be effective, concluded that the teaching of reading is best effected through a combination of five techniques: phonemic awareness (hearing sounds in words), phonics (understanding sound/letter relationships), fluency (oral and written reading proficiency), vocabulary (building a rich store of words and meanings) and comprehension (understanding the meaning of oral and written language) (National Reading Panel, 2000).

(GPLMS) programme in Gauteng for Grades R-6, which includes workbooks, orientation training and scripted lessons.

At provincial level, 10 of the 16 respondents either said they did not know or were not able to comment on interventions in the field of Mathematics. For those who responded in the affirmative, programmes to improve Mathematics teaching included the 1+4 project and lesson plans the DBE workbooks), Hey Maths, Mental Maths competitions, Training on Concrete-Pictorial-Abstract approach, the LitNum and MST strategies, and Mental Maths Challenge.

Responses to the questions by district-based SAs in the FET concerning interventions for Mathematics teachers were similar to those given for Literacy described above: workshops for teachers, sending selected learners (who are encouraged to 'co-opt other learners' when they go back to class) to camps and weekend classes, participation in the Maths Olympiad and MiniQuiz competitions run by Mintek and the establishment of Mathematics clubs in schools.

The 1 + 4 initiative of the DBE was mentioned in District C (where it is known as 1 + 9), although it was noted that attendance was not 100%. The SA for FET Mathematics in District D was not complimentary about the programme: *Its not assisting us. When you reduce 5 days of teaching to 4, how can you expect an improvement? And we can't say with confidence that there is a competent person to lead them. Content knowledge gaps also affect some of our subject advisors, particularly because many of our SAs were not appointed but absorbed [when colleges were closed]; this was particularly the case of GET SAs.* Interviewees in District B were of a different view regarding 1 + 4 (here it is known as 1 + 10): teachers meet on Saturday morning, but interviewees conceded that attendance was poor.

The JICA programme was mentioned with approval in District D: '…*a very good project'*.

Are current approaches to CPD working?

Despite the enthusiasm with which senior managers described the various intervention programmes in Literacy and Mathematics, there was unanimity at national level that current approaches to educator development were not working; one senior manager added, as noted above, that poor quality ITE was part of the problem. Another senior manager was of the view that CPD should begin at school level, facilitated by SMT members, but noted that this approach is inhibited because most school level leaders wait for direction from the district in these matters, instead of taking the initiative themselves. This idea found resonance with another national level manager with respect to the development of SAs to enable them to do a fine-grained diagnosis of learning gaps and customise interventions to address specific needs: *SAs need to be action researchers, to diagnose trends and needs. Some of our programmes are resisted because we provide a one-size-fits-all intervention, which don't necessarily meet their needs. ANA and NSC Diagnostic Reports still too general: need to take it down to the item level. But teacher development is better done at school level.*

For six of the 16 provincial level respondents, CPD was working to a limited extent. A criticism mentioned by one, referring specifically to the SACE model of CPD, was that the focus is on the accumulation of accountability points, while the implementation of the skills acquired and evidence of improved learner performance is lacking.

The view that workshop training is ineffective was also widespread among district level SAs and was expressed at least once in each of the four districts. Teachers are often too tired to concentrate in afternoons, have transport and family duties to think about and, in the majority of interviews, respondents were of the view that little was achieved. In District B, the issue of teacher attitudes was again mentioned: *the ones who need it most don't come to workshops*.

Interviewees in District B had a very poor view of the extent to which the PLC concept was working: … *the concept is doomed from the beginning. Concept of critical friends failed as a*

project. Clusters meet to moderate tests, BUT our teachers are not willing to run them as envisaged, because expertise and willingness of different groups are different; many don't pitch because they are called by ordinary teachers. Rather, use subject advisors, lead groups with experts. We are compelled by HO to run PLCs, but they don't function as envisaged; and the cascade model has been known to fail. DPIP [a project of the local university based on a PLC format] was run by experts, which is why it worked.

Regarding progress on the pilot of the DBE's online CPD system, according to two senior managers, the programmes are being uploaded in the 81 teacher centres distributed across the country in partnership with Vodacom. It was agreed that uptake is very low: to date only 487 teachers have assessed themselves in EFAL and 653 in Mathematics; the target is to get 20 000 teachers to participate. At the provincial level, 12 of the 16 respondents said they were unaware of the on-line programme or that it was not applicable to them. No respondents felt able to comment on the progress of the programme, but one thought that many teachers were sceptical about participating. However, it should be mentioned that the programme is still in pilot phase and widespread uptake cannot be expected at this stage. One national level respondent thought that the problem of low uptake derived from inadequate advocacy and from the fact that when teachers access the system from home it costs them money (internet connection, data download). Another mentioned that some teachers had experienced difficulties in registering on the system.

On the question of what could be done to improve the effectiveness of CPD, one senior national level manager continued her idea that addressing the problem needs to be part of a complete system overhaul: *Need a sectoral strategy: train teachers, across the board, in phases, over 5 years. Encourage early retirement, but selectively so we don't lose the best. Use unemployed graduates as substitutes while being trained. Can have the smartest IT, books, etc., but impact is dependent on quality of teachers*.

One DBE official made a different kind of suggestion, emphasising the importance of teacher agency in pursuing their own professional development: *Institutionalise it [CPD]: it should come from within. In Japan teachers are responsible for their own CPD. Encourage teachers to belong to professional organisations. AMESA picked me up from being a novice: such COPs are important in developing the professional attitudes and skills of teachers*.

At provincial level, there were also a great many suggestions, including strengthening the district teacher centres, facilitating access to the on-line system, quality assurance of CPD programmes by SACE, utilising the provincial budget for CPD more fully and integrating the work of teacher development officials at district level supporting SAs.

In thinking about how to improve CPD, SAs in all four districts recalled a time in the past when week-long residential courses were held for teachers and that these had been effective. They recommended that these be reinstated, preferably over the holidays, that teachers should receive subsistence allowance to facilitate attendance and that each district should have its own in-service centre.

Q3.7 Does the SMT provide adequate instructional leadership?

Are school HODs doing a good job of supporting teachers?

There is unanimity among senior managers at national level that school-level HODs have a most important role to play in mentoring teachers and leading teaching and learning in the schools, but that the majority are not doing what is required. One DBE interviewee explained: … *we refer to them as the missing middle. No one pays attention to them, [they are] never held accountable*…. Another noted that a fundamental problem is that the role of HODs in the system may have been defined in policy, but there is a disjuncture with practice. Consequently, the DBE is working with provinces to re-socialise SMTs into their proper roles as instructional leaders.

Part of the problem is that many HODs are responsible for overseeing a number of subjects, while having specialised in only one or two of them. As a result, monitoring the work of teachers is reduced to a tick-box exercise; as one DBE manager put it: *In the FET band a Science HOD may be in charge of a group of subjects e.g. Physics, Chemistry, Life Sciences and maybe Agricultural Sciences. So what some SAs have been doing is using an instrument/tool to monitor and support the subject. They use that instrument to be able to support teachers because sometimes the HOD doesn't know all the subjects*.

Furthermore, in the large majority of schools, HODs are assigned a full teaching load and thus have limited time to work with teachers. As one national level respondent said: *This affects their being able to do their job as they do not have time for mentoring and monitoring teachers, particularly in under-resourced schools. The HODs are so absorbed with their own classrooms that the role to support curriculum management and curriculum implementation is not happening*.

These views were mirrored by officials at provincial and district levels. In District B, for example, one respondent described the problem as follows: *[There are] huge difference between the quality of different classes in the same grade and same school, but HOD does nothing about it, if he knows. A study needs to be commissioned into their roles and responsibilities and their effectiveness. PAM does lay these out but they are not followed*.

At the provincial level, 13 of the 16 respondents said that although some HODs were doing excellent work, the majority were not fulfilling their functions adequately. The reasons they gave for this view were the same as those offered at national level: promotion of people without the necessary knowledge and pedagogical skills, HODs being responsible for too many subjects and not having sufficient time to work with teachers.

A number of interviewees questioned the commitment of HODs to providing leadership: *They think they are just equal to P1 teachers, they complain about extra work. They go for the post because of its benefits*. *…. they need a change of mind-set to operate at this level. Some of them still behave like they used to, talking against the SMT*.

Are we selecting the right people?

A widespread view expressed by interviewees at all three systemic levels was that there is a general failure to recruit the best people for the job and, as a result, some teachers are better informed and more competent than their HODs, who cannot gain the respect of teachers under these compromised circumstances. Many respondents felt that this was a major problem (discussed in more detail in the following section below). Interviewees attributed this situation to the fact that the HR systems which govern promotions are not adequate to the task and consequently, many incumbents in promotion posts are not competent for the positions they occupy. One senior manager at national level summed up these sentiments as follows: … *school managers are appointed by the SGB, who often don't have the capacity not to practice nepotism, under union influence. [The] power of SGBs need to be revisited, [reassign this] power to districts. SGBs can participate, but decisions must be taken by professionals. Difficult to deal with SADTU, because it's more like a political party. Many officials are members of SADTU, there is a tendency to follow the union when in conflict with the department*.

View from the school

HODs and principals very often do not agree on the role of HODs. Monitoring teaching in the subject or phase in which they specialise is arguably one of the foremost responsibilities of HODs. Yet in District A, three principals did not even mention this as a function of their HODs, even though at two of these schools, the HODs interviewed mentioned monitoring teaching as being one of their main functions. The teachers interviewed at those schools confirmed that they had been observed in class and received helpful feedback from the HODs.

Despite the lack of clarity about their functions, according to the principals and HODs at all sample schools, the work of HODs was reportedly monitored regularly. In fact, HODs at the majority (22/24) of schools said their work was monitored regularly by the principal or deputy principal. Given the lack of congruence on the role of the HOD and absence of evidence in the form of monitoring tools, it is not clear exactly what was being monitored and to what ends. Not only does this reveal a lack of coordination among those responsible for instructional leadership at these schools, the incoherence will almost inevitably result in an unevenness of support and guidance to teachers.

The overwhelming majority (41/57) of teachers interviewed across the sample said they needed more support from their HODs, with two-thirds citing curriculum delivery as their main area of need – specifically pedagogy, content knowledge and assessment. At one school in District D, a secondary school teacher of Mathematical Literacy said she needed curriculum support from the cluster or district office. This highlights the perception that such support could not be sought from instructional leaders within the school.

At the majority (17/24) of schools visited, classroom observations reportedly took place, although not all HODs at these schools observed lessons. Where classroom visits were not done at all, school policy or union policy (sometimes both) were cited as the reason for not doing so. The findings are summarised in Table 25. If this data is valid, then a sharp change in the frequency of classroom observation has taken place in the last two years, prior to which school visits by NEEDU (2013; 2014) indicated that few schools conducted a systematic programme of classroom observations. Supporting the validity of the present data is the fact that HOD views were almost invariably corroborated by teachers, who not only received feedback after classroom observations by their HODs, but found the feedback useful. Further, indirect, corroboration is provided by the use of DBE workbooks, described in the section on learner writing (section 4.1.3) above, where teachers within each school produced very similar quantities of writing, while interschool differences were large. This would seem to indicate that a relatively high degree of coordination of the work of teachers within grades and subjects occurs, although this could as well happen by teachers voluntarily cooperating, as it could be the result of a coherent instructional leadership programme.

Table 25. Teachers' views on classroom observations by HODs

SCHOOL	Are lessons observed by HOD?	What happens during classroom observation?						Feedback	
		Observe teaching	Team teaching	Complete monitoring tool	Check lesson, books, assessment	Check lesson content is according to curriculum plan	Other: specified	Given?	Useful?
APRH	Yes	✓		✓				Yes	Yes
APRL	Yes		✓		✓			Yes	Yes
APUL	Yes	✓					Check lesson plan	Yes	Yes
ASRH	Yes	✓			✓			Not always	Yes
ASRL	Yes	✓					Data not available	Yes	Yes
ASUL	Yes	✓	✓	✓	✓			Yes	Yes

BPUH	Yes	✓		✓	✓	✓		Yes	Yes
BPUL	Yes*	✓		✓	✓	✓	Check planning	Yes	Yes
BPRH	No							n/a	n/a
BSUH	No							n/a	n/a
BSUL	Yes	✓			✓	✓		Not always	Not always
BSRL	No							n/a	n/a
CPRH	No							n/a	n/a
CPRL	Yes			✓	✓			Yes	Yes
CPUL	Yes	✓	✓	✓	✓	✓		Yes	Yes
CSUH	No	✓		✓		✓		n/a	n/a
CSRL	Yes*	✓				✓		Yes	Yes
CSRL	Yes	✓		✓		✓		Yes	Yes
DPUH	No							n/a	n/a
DPUL	Yes	✓			✓	✓	Discuss gaps	Yes	Yes
DPRL	Yes		✓	✓	✓			Yes	Yes
DSUH	Yes		✓		✓	✓		Not always	Yes
DSUL	Yes	✓		✓	✓	✓		Not always	Yes

District A was the only district where classroom observations were carried out in all of the schools visited and by all HODs in the departments evaluated. Furthermore, teachers were given feedback that they said was useful, apart from at one school where teachers did not get feedback from observations in Mathematical Literacy.

In District C, CPUL stands out for having the most comprehensive approach to classroom observations. At this school, HODs attended to all the aspects of classroom observations listed above. This included team teaching, which is an effective form of professional development usually associated with one-on-one mentoring. Moreover, teachers at this school said they always received useful feedback after classroom observations. In fact, researchers noted a purposeful atmosphere at the school, which is led by a strong principal whom teachers speak of with high regard. The SMT at this school was described as *close knit and working as a team*. This was the closest to an 'epistemic' school seen in the sample of 24 schools.

In contrast, there were no classroom observations at half (3/6) of the schools visited in District B and, where observations were done, they did not necessarily apply to all teachers. BSUL was the only secondary school visited in the district where classroom observations did take place. However, teachers said that the feedback from observations in Mathematical Literacy was not always useful and there was no feedback after being observed in EFAL lessons. This was probably because the HOD for EFAL was a geography teacher with no training in Language teaching at all. He was responsible for three subjects – Geography, History and EFAL – but attended CAPS training in Geography only.

Monitoring learners' work is another important aspect of instructional leadership. It is an effective way of checking that learners are doing enough written work which is checked by

teachers and that the curriculum is covered comprehensively and in adequate depth. According to teachers, although not all HODs monitored learners' written work, this was done in at least one subject in all but one of the schools visited (**Table 34**). The exception was DPUL in District D, where learners' written work was not checked at all.

Conclusion on SMT leadership

There is evidence to indicate that instructional leadership was occurring to some degree in most schools: for example, most schools planned the timetable according to CAPS requirements; yet following the curriculum appeared in some schools to be honoured more in the breach than otherwise; it seemed to be at best a very haphazard practice in most schools visited. On the very important topic of assessment, the high frequency of contradictory answers from teachers and HODs indicates a lack of a coherent assessment regime in the schools. Planning at the teacher level was inconsistent and, where it was strongest, was driven from the district or province.

In short, most of the instructional leadership activities were complied with in a superficial manner in almost all the schools; the activities lacked substance and hence the schools were unable to succeed in their goals. One exception to this conclusion appears to be the coordination of learner writing activities in DBE work books at the school level. The evidence for this is indirect and this activity may occur through teachers working together without the participation of HODs; whatever the explanation, it is a promising development. Another glimmer of improvement is indicated by evidence that the frequency of classroom observations undertaken by HODs has increased significantly in recent years. There are signs of movement in the right direction.

Among system-level instructional leaders, there was a widespread view that although there is a minority of HODs who are doing a good job, most were not competent, imposing a severe inhibition on the effectiveness of monitoring and support at school level. There was also agreement that a large part of the problem was due to the application of inappropriate selection procedures in promoting educators to these posts. These practices result in a wasted opportunity: people are paid to fill these critically important posts, but fail to gain traction through their monitoring and support activities. Furthermore, the long-term effect on educator motivation is devastating: if expertise is not required for promotion purposes, why should teachers exert themselves in their classrooms or waste time developing their own capacities? Perhaps worst of all, how can a culture of excellence be promoted in a system in which teachers have no professional respect for their leaders?

Q3.8 Does the school maintain an effective in-school CPD programme?

In-school CPD is the process whereby learning opportunities are structured for teachers who require assistance with one or other aspect of curriculum, pedagogy or assessment and for effective teachers to learn new practices. Within school, CPD is best carried out through peer learning experiences, where teachers expert in the topic under discussion take the lead, providing insights and novel practices to their colleagues. It is a key element of any thoroughgoing instructional leadership system, but is discussed separately here in order to emphasise its importance as a mechanism for SMT members and teachers to share their expertise and cooperate in delivering a coherent, high-quality teaching and learning programme in the school. As the curriculum leaders closest to the classroom, it is incumbent on HODs to maintain a systematic in-school CPD programme.

Unfortunately, there is very little consistency in the approach of SMTs to in-school CPD within districts and even within the same school. Throughout the four districts visited, there was no in-school CPD provided at all at half (12/24) of the sample schools (Table 35) and in only 4 schools did teachers agree that CPD was provided by the SMT. The approach on this matter varied from subject to subject, seemingly at the discretion of the HOD, and the CPD was often

limited to peer observations or subject-specific meetings which were not always led by a member of the SMT.

One primary school in district B (BPUH) proved to be something of an exception: here teachers' described how their needs where identified in consultation with the relevant HOD, followed by in-school CPD provided through subject- and grade-specific meetings led by members of the SMT or whole-school meetings where the SMT gave presentations on areas challenging to teachers. HODs also coordinated peer observations so that teachers had the opportunity to visit other classes at least once a term.

4.4 Question 4

Q4 Is the theory of change working as expected? Based on how the theory of change is working, are we likely to see the planned outcomes of CAPS?

Of all the respondents engaged at national, provincial and district levels, only one, a senior manager in the DBE, gave an unambiguously positive answer to the second question. He backed up his assertion that the outcomes were beginning to be achieved with evidence from the latest rounds of SACMEQ and TIMSS testing. Most other system-level respondents were conditional in their view that the CAPS outcomes are likely to be achieved; here is a typical response, from the national level: *We have the potential, as long as we can mobilise our resources …. Too many parallel activities: multiple layers of support for teachers (school, district, province, DBE), which overwhelms them. Who do they pay attention to? Need to synergise out activities. A good example of a way to address this issue is the multi-stakeholder meeting of key players involved in primary schools held recently in DBE to talk about working together*.

Provincial level respondents also placed conditions on the achievement of the CAPS outcomes; for example: *Unless we address the active participation from unions we will not be able to move forward*. Another provincial level respondent highlighted the fact that assessment was being emphasised to the detriment of teaching and learning: *The teaching and learning time required by CAPS is not being adhered to by the province and districts. The emphasis is currently on assessing and reporting instead of on teaching and learning as required and prescribed by CAPS*.

Instructional leaders in districts agreed with their provincial and national level counterparts that certain conditions need to be met before the CAPS outcomes are likely to be achieved. One of the challenges identified by one interviewee was that achieving the outcomes would take time and would only happen if the whole system were to be addressed systematically: *Not immediately, but the long term we will achieve the outcomes. Presently we mainly look at G12, and we need to look at all grades. We pay lip service to this, but as soon as there is money, we focus on G12, e.g. winter schools, extra materials*.

Since the TOC outlined in Figure 2 is a reformulation of the DBE's *Action Plan to 2019: Towards the Realisation of Schooling 2030* (DBE, 2015b), system level curriculum leaders were asked two questions*: Is there anything missing from the constellation of activities comprising the Action Plan to 2019* (including CAPS, ANA, workbooks, teacher development, monitoring and support)? and *What can be done to strengthen the Action Plan to 2019?*

In response, one senior manager in the DBE linked the *Action plan to 2019: Towards the realisation of schooling 2030* to the NDP and emphasised the comprehensive, systemic nature of the *Action Plan to 2019*: *The NDP says that the Action Plan is spot on: it says that NDP should be aligned to Action Plan, not the other way around; 27 goals, 13 on outputs and 14 on inputs and processes. Nothing we need to change.*

Another said: *I think that it [the Action Plan] is adequate: the activities are geared to address the situation in our schools. The Action Plan is very clear, and now it's up to us to implement,*

but that is where we are falling short. We don't need a new strategy, the focus should be on implementing at every level. But if I knew how to do that we wouldn't be where we are.

A third senior curriculum leader in the DBE emphasised that implementation involves building capacity at school level, on an institution-wide basis, and should be integrated into the day-to-day work of teachers and instructional leaders: *Instructional leadership is key to in-school CPD. Building effective schools is fundamental: once we have that all other problems fall into place. Unlock the door to solving problems at school level: focus on the core business of the school, teaching and learning, but we tend to focus on everything else*.

There was also general agreement among respondents at provincial level that the *Action Plan to 2019* is sound. Factors mentioned as contributing to improved implementation included improving monitoring and evaluation and assessment practices and linking learner performance and teacher development through IQMS and the Performance Management Development System. Again, the issue of educator attitudes arose: *[We need an] attitude or mind-set change which is perhaps part of teacher development*.

Similarly, at district level, the *Action plan to 2019* was generally regarded with approval by curriculum staff interviewed and was explicitly praised in three of the four districts visited. At the same time, a number of shortcomings were mentioned, including HR planning, resource management, finances and a feeling of impotence: *Authority is weak; we are managers without teeth*.

One district level respondent identified poor assessment techniques as a factor inhibiting implementation of the *Action Plan to 2019*: *Assessment can be improved so that we get the true picture, authentic, of what is happening in our schools. We get schedules from schools quarterly, but we know that this is not what is happening; nothing is standardised, and teachers assess at different levels.*

One respondent in District D suggested that scripted lesson plans may be a solution to teacher under-preparedness: *One thing missing is teachers going to class unprepared. I would come up with exemplar lesson plans which cover the curriculum. Scripted lesson preparations, detailed not summaries: activities for teachers and learners*.

Another issue that was raised in Districts B, C and D was the question of 'progressed learners', described by one interviewee in District B as follows: *'CAPS is not working for progressed learners: how can we address this issue? Consolidation and remediation should be provided for, but there's not time because of packed curriculum'.* One respondent in District D felt that the progression policy was a good thing, but agreed that it required more support to be successful: *'A positive feature is the principle of age promotion; this is very progressive and reduces drop-outs. But when they are progressed they should have an individual programme of support'.*

4.5 Question 5

Q5 Based on the likelihood of achieving the outcomes, is the conceptualisation of CAPS and the systems for implementing it relevant and appropriate for the context it operates in?

On the question of context, a firm view, encountered at national, provincial and district levels, was that schooling is a modernising enterprise which attempts to offer the same opportunities to children in all spheres of society. This idea was well captured by one of the DBE respondents: *The curriculum is bringing equity into the system. All learners, no matter which context, have the same NSC that enables them to compete in the global market*. The same idea was well expressed at district level: although the schools in District A are predominantly rural, SAs did not see this as a reason for having a different curriculum to serve this context and echoed the sentiments expressed in the other districts: *We are rural but we still need to*

be scientific: our children will be moving to cities. The curriculum is fine: most homes have television and we do have libraries. So, yes we are rural, but we don't need to a special curriculum. Excursions to see the wider world would help.

Some educators felt that, although CAPS provides a common standard for all schools, a degree of flexibility to allow teachers to adapt it to particular conditions is also necessary: *Yes, we do need a common standard, irrespective of context. At the same time, there is no flexibility in CAPS: [it is] very rigid and precise. Can we set a minimum, but allow room for flexibility?*

In response to Q5, a number of respondents again noted that while the design of the *Action Plan to 2019* and of CAPS in particular, are appropriate, implementation remains a problem; this in turn indicates low educator capacity and inappropriate attitudes. For example, one interviewee in District D was of the view that the differences between urban and rural schooling lay not in qualifications or resources, but teacher attitudes: *There is a striking difference between rural and town teachers, with the latter doing much better; its not a question of qualifications, but of commitment, attitude and time on task. At month end and on Fridays: if learners know that teaching will happen on these days they won't dodge.*

One national level interviewee reflected what was a widespread feeling encountered at all levels of the system, saying that he was strongly opposed to any changes to CAPS: *The 2009 Task Team recommended that we leave the curriculum to stabilise for at least 10 years. We can't meet the objectives of the NDP if we keep changing the curriculum. There are talks that disturb me, like phasing out Maths Lit; a task team is reviewing the curriculum*.

4.6 Question 6

Q6 Are there any gaps and challenges in the CAPS design and content? If any, are they hampering implementation?

Picking up the point made in the previous paragraph, another senior DBE leader mentioned that criticism has been received from counterparts in Scotland, New Zealand and Wales that the South African curriculum is too wide. *We need to take heed of this criticism: while trying to address the values appropriate to our society, we also need to think about narrowing and deepening the curriculum. But what to cut out is the difficulty: we need to engage experts and practitioners. But we're not ready for a major overhaul now: we are working with subject committees to fine-tune CAPS, but we don't want a major overall*.

Eleven of the 13 national level respondents supported this argument: according to the majority of respondents, while there may be minor issues requiring tweaking, at this stage the CAPS documents require no amendment. The two respondents who did not agree said that the area of assessment requires attention, and in particular Section 4 of CAPS needs to be looked at. One very senior manager expressed the problem as follows: *the nature and range of tasks need to be looked at; how we deal with various cognitive levels; and the overload of tasks in some instances. … we are relooking at SBA and content. We are becoming an assessment loaded system*.

At provincial level, the majority of respondents (10/16), agreed that there were gaps, but on closer examination these turned out to be details with respect to relatively minor adjustments in individual subjects. At a more general level, one proposal called for clearer guidelines on assessment activities and a third raised the issue of an over-full curriculum: *The curriculum is too packed thus teachers rush to finish. No time is allocated for assessment, examinations and administrative work*.

At district level, Q6 evinced a great deal of discussion in all nine interviews, particularly where SAs were involved. Some of the discussions are worth quoting in detail because of their explicit nature.

District A: *Looking at languages: ATP indicates what is to be done, but teachers get confused as to exactly what to do, doesn't specify. In maths some higher topics were taken lower down, and there is conceptual overload. Home language: focusing on oral and papers 2 and 3; paper 1 (language structure) is somewhat neglected, so teachers focus on papers 2 and 3 because they are emphasised in the ATP.'*

District B. *Too long, too much content, especially Maths G10 …. Tech maths is a mess: cut and paste from maths curriculum; cognitive levels same as maths; huge room for improvement. Maths Lit is also a mess: its mostly English comprehension, not arithmetic. The standard in EFAL is too low: it's emergent literacy, but not even the basics of the basics, and there are too many components in NSC papers, all assessing at superficial understanding. English Home Language: the language conventions are not explicitly taught, rather use an infused approach, which is very superficial. There is no formal assessment of reading throughout.*

District C: *For FP the content is given per term, but not divided into weeks, just a list for the term. So it's difficult to monitor. But in SP and FET skills are divided into weeks. We have tried to make an ATP for the FP. Even with assessment, although its 100% continuous but it's not well explained. It needs to be more detailed with respect to levels*…

At FET [there is a] problem with the teaching plan, it's too scanty, teach pronouns, but the 'how' is not there, it needs more flesh. The NSC exams tell us they're not performing in language, but there is not enough time to develop language skills. In isiZulu the language structures and conventions are listed there, but it doesn't show how to teach. Communicative approach is specified, but not how. Also the cognitive levels, which are there in broad outline, but we need more elaboration, e.g. literal easy, literal moderate, literal difficult.

District D: *Yes, [they can be improved] particularly the GET docs. They are packaged according to the term, but it would be even better if they were specified by week. Also the workbooks should go according to CAPS: aligned. Too many activities in the workbook for each day.*

Despite the many criticisms described above, it would be fair to say that the following comment made in District D captures something essential about the overall view of educators across the system towards the curriculum: *CAPS brings back the old culture: a clear syllabus, preparation, daily coverage; it brings focus to teaching. It promotes a culture of teaching and learning. But the problem is a lack of resources.* Moreover, all discussants agreed that the resource most in need of improvement is human.

In this regard, the question as to the extent to which ITE is meeting the needs of schools and the role of university teacher educators was again raised by a respondent at national level: *Not sure whether the university teacher education sections are looking at CAPS or the NCS. The teachers coming out only seem to hear about CAPS when they come to the schools. The principles are there but the focus is on content and skills and not those principles. Teacher education could assist in interpreting the CAPS particularly in certain areas to relook at the content and the skills and see whether it is appropriate for the 21st century. Everybody has a role not only the DBE. Universities need to be more involved.*

4.7 Question 7

Q7 How should the CAPS design and the systems for implementing it be strengthened?

This is a higher order question, the answers to which depend on conclusions drawn to prior questions: it is thus best discussed in the section that follows a summary of evidence pertaining to the previous six questions (see section 5.7).

5 ANSWERS TO THE EVALUATION QUESTIONS

It is as well to remember that the seven evaluation questions apply specifically to schools in Quintiles 1-3 in the four target districts. These schools are typical of a very large part of the school system and certainly it is the domain in which learning is largely very poorly delivered. Other parts of schooling in South Africa operate far more efficiently and effectively, but the schools under consideration in the present evaluation offer the greatest potential for breaking the cycle of poverty, or at least rendering the glass ceiling of the poor and marginalised classes more permeable to disadvantaged children.

5.1 Q1: To what extent has CAPS been implemented?

Perhaps this question should rather read 'To what extent is CAPS *being* implemented?', since no curriculum delivery is ever complete. There is evidence that learner performance is improving across the system, although the establishment of CAPS is too recent for it to claim the credit for this achievement. All indications are that CAPS is contributing to a slow, system-wide improvement in learning outcomes. However, while any improvement is welcomed in a system which has experienced vigorous public criticism for many years, the very poor general state of teaching, learning and leadership in Quintile 1-3 schools gives urgency to the task of finding ways to improve curriculum delivery in this sector.

As indicated in **Figure 2**, CAPS is part of an intricate system of levers and pulleys which 'deliver' the curriculum. The evidence laid out in section 4 indicates that some parts of the new curriculum, for example, drawing up the timetable, are being implemented in the majority of schools studied in the evaluation. However, the timetable is not being adhered to in most schools, egregiously so in many.

There seems to be a prior question that requires answering: 'Is CAPS *implementable* under the institutional conditions pertaining in the majority of the 24 schools examined?' One of the most telling pieces of evidence to emerge from the present study is that, on the two days of the visits by evaluators, time was extremely loosely managed in 18 of the 24 schools sampled. Only six had, at most, one teacher not in class during one or both of the last period on the first day of the visit and the first period on the second day. In addition, in all the schools visited, frequent disruptions to the timetable occurred for a variety of reasons: training, union meetings, memorial services, choir competitions and the like. Under these circumstances, no curriculum is implementable, no matter how well educated the teachers are, or how well they teach. There is simply not enough time to get through any halfway ambitious curriculum, and CAPS is certainly an ambitious curriculum.

Poor time management, the most obvious manifestation of institutional dysfunctionality, was first mentioned in 1988 at the highest political level as a significant problem. Yet, judging from the evidence in **Table 16**, this is a problem which persists and which fundamentally undermines teaching and learning. The problem with a disrupted timetable is not only that it leaves insufficient time to work through the material, but it distracts from disciplined academic study, which requires continuous focus and sustained effort.

Interviews conducted at the three system levels indicate that district, provincial and national officials are aware of this problem and complain about it frequently. Yet many officials do not accept responsibility for school functionality, although, in terms of their job specifications, they have not only the authority but indeed the obligation to intervene in these institutions. Essentially, educators who neglect their classes are guilty of what Patillo (2011) calls *quiet corruption*. At the same time, school level curriculum leaders deny that time is being very poorly used in their schools. They too are not doing what they are paid to do, and hence are guilty of the same brand of corruption, as are the district officials who know it is happening, but feel powerless to intervene.

These attitudes are starkly illustrated in the description of time management practices at School X (**Box 5**). Seen from this perspective, systemic school reform must start by addressing the lackadaisical culture which permeates this sector of the system; the key to that project, in turn, is to redefine the concept of the 'normal' school. A culture of passivity and powerlessness must be replaced with one of agency and energy, where individual educators take responsibility for directing their own work and optimising the potential of each child in their charge.

It is appropriate that the solution to this problem is given serious attention in the political sphere. However, such statements, on their own, have proven ineffective and stronger political leadership regarding this issue needs to be accompanied by a carefully constructed plan, with responsibilities allocated in the bureaucracy and driven by well-functioning human resource management procedures.

5.2 Q2: Do teachers understand CAPS and do they have the necessary capabilities and motivation to implement the National Curriculum Statements according to CAPS and associated policies?

The evidence bearing on Question 2 which comes most insistently to the fore is contained in the teacher scores on elementary tests in English and Mathematics. Of the 22 Grade 2 teachers tested, only five achieved the modest benchmark of 60% in EFAL and three achieved it in Mathematics. While it is risky to draw conclusions from short tests of this kind, the results suggest that between two-thirds and three-quarters of these Grade 2 teachers do not possess the subject knowledge required to teach English or Mathematics.

The picture for Grade 10 teachers is very similar, with six of the 12 English teachers reaching 70% on the same test administered to Grade 2 teachers, four of the 12 Mathematics teachers scoring 70% on the Mathematics test and three out of 12 Mathematical Literacy teachers reaching 60% on the same Mathematics test. These figures suggest that fully half the Grade 10 English teachers are not competent in English, while around two-thirds to three-quarters of Mathematics and Mathematical Literacy teachers have fundamental gaps in their knowledge repertoires.

With these scores in mind, the question as to whether teachers understand CAPS requirements is almost redundant: while they may understand when the respective topics are to be completed and how many tests should be set each term, the teachers cannot understand the level of knowledge to be attained by their learners if they do not possess that knowledge themselves. This view was largely shared by system-level managers, although the real picture appears to be more pessimistic than the generally poor regard in which managers hold teachers. Alongside the lackadaisical use of time in most of the sample schools, the generally poor subject content knowledge of teachers is a second fundamental barrier to learning.

5.3 Q3: Are the support systems to support CAPS implementation working?

It can be argued that the entire school system is designed to support teachers to implement the curriculum, but we confine this discussion to those elements most immediately concerned with curriculum delivery. Support is provided by the DBE in the form of policy, CAPS documents, workbooks, the ANA tests, the coordination of professional development and general curriculum management. With the exception of the first of these, which we return to below, most of these elements appear to be in place, although many teachers were without their own copies of the CAPS documents, particularly the policy on progression, promotion and assessment.

There is wide agreement among curriculum officials at the systemic level that support for teachers is not optimally provided by districts and schools. At both levels, two issues were identified by respondents as problematic. First, there is a mismatch between expectations of how SAs and HODs should support teachers on one hand, and the resources available for

them to meet these expectations on the other. It is generally expected that SAs should visit schools and support teachers directly in their classroom; they themselves feel that this is where they are most effective and this view is corroborated by teachers. But this is a quite unrealistic expectation, given the large numbers of schools allocated to each subject advisor, sometimes as high as 200. Similarly, HODs generally have full teaching loads, with little time available for working with teachers.

When there is a mismatch between two variables, then one or both must be adjusted to attain equilibrium: either we change our expectations – our models of teacher support – or we provide far more SAs, with adequate transport to visit schools frequently, and more HODs with a lighter teaching load so that they can lead in-school CPD opportunities for teachers. These measures will necessitate hiring more teachers. It can be argued that greatly increasing the number of SAs is unlikely to be feasible, particularly under current conditions of financial austerity; and this may not necessarily be the most effective use of curriculum experts, given their dire shortage in classrooms and schools.

The alternative to significantly increasing the numbers of educators in instructional leadership posts, which does not seem possible, is to change the way they work, so as to have maximum impact on the quality of classroom engagements. If we accept that in-school instructional leadership is an important element in any attempt to improve teacher competence and effectiveness on a system-wide basis, then HODs would be central to such an effort. It follows that, SAs should focus their efforts on working with HODs to strengthen their capacity and build the systems needed to take instructional leadership from a disparate set of superficial practices to an integrated school-wide focus on curriculum, assessment and pedagogy.

Partly responsible for the weak instructional leadership exerted by HODs and SAs is the appointment of inappropriate candidates to these and other promotion posts. The view that nepotism, bribery and the buying and selling of posts is rife in the awarding of promotion posts is widespread among system-level interviewees and supported by the recent Ministerial Task Team established to investigate 'jobs for cash' allegations (DBE 2016c). Curriculum delivery is a process which is highly dependent on the levels of education and professional expertise of educators, whether situated at classroom, school, district, provincial or national level. A system which does not carefully select and continuously educate this cadre of instructional leaders cannot optimise learning; a system which allows these processes to be abused on a wide scale is turning a blind eye to the destruction of its own best intentions.

Encouragingly, government has signalled its intentions to strengthen the appointment procedures for principals and district staff. The application of competency tests to shortlist candidates for principal posts has been in use in the Western Cape for three years and anecdotal evidence indicates that the system is gaining traction with School Governing Bodies and procedures are being piloted at the level of HOD appointments.

5.4 Q4: Is the theory of change working as expected? Based on how the theory of change is working, are we likely to see the planned outcomes of CAPS?

The Minister of Basic Education is on record as being very dissatisfied with the performance of the school system, particularly with respect to serving children from poor homes who attend the kinds of schools examined in the present evaluation. In the language of the TOC which drives the present evaluation, the learning gap between the achieved curriculum (Node 7) in Figure 2 and the assessed curriculum (Node 3) is unacceptably high. If curriculum targets are not being met, it means that blockages occur somewhere in the network of inputs and processes through which the curriculum is implemented. The presence of a large learning gap occasions a re-examination of the TOC, in the light of the evidence gathered by the evaluation.

The field covered by the TOC consists of three vertical streams of Inputs and Processes, delivered respectively at the classroom, school and system levels. Fundamental to the

effective functioning of each of these streams is the appointment of educators competent to perform their jobs. The importance of this feature is indicated in Figure 2 by the green colour of the textbox at the head of each stream. Ample evidence is provided in section 4 above, supported by the research findings summarised in section 3.9, to indicate that far too many teachers and instructional leaders are not fully competent. The majority of teachers lack adequate knowledge of the fundamental principles of the school subject(s) for which they are responsible, while instructional leaders often do not garner the respect of their peers, subordinates or superiors because of poor performance. Educators at all levels are dissatisfied, complaining about each other, but feeling powerless to intervene, even where such intervention is their direct responsibility. This is not a culture which is conducive to fostering excellent schooling.

While educator skills are not something educators can be held fully responsible for, since they arise largely from their own education in their homes and schools, it is also true that motivated people are able to educate themselves. We have argued that dedication and skill are related: the former is needed for self-education, while a skilful teacher will produce strong learner performance, which in turn increases her sense of pride and dedication towards her learners and the wider profession. A number of important steps must be taken to address both issues – educator capacity and attitude – if the system is to offer better opportunities to learners from poor homes.

It goes without saying that if too many educators are incompetent, then they will not fully realise their functions, which is to realise the output at the end of each stream: system-level instructional leaders will not provide effective monitoring and support services to schools and teachers; school-level leaders will not provide effective monitoring and support services to teachers (Node 6a); and teachers will not deliver effective lessons (Node 6b). The primary blockages occur, however, in the green blocks of Figure 2, which are therefore shaded red in the Revised TOC (**Figure 8**). These are the points at which intervention will have the most profound effects on the system, since they occur earliest in their respective streams. Improving educator competence must therefore rank as the most important priority in the quest for improved quality.

The revised TOC shown in Figure 8 can be understood as follows:

The knowledge skills and values (KSV) which society espouses are translated into topics, activities and attitudes outlined in the curriculum. The curriculum (CAPS) is developed such that it provides clear guidance to educators on the KSV to be taught in South African schools (Node 1).

The curriculum (Node 1) informs the development of learning and teaching support material (LTSM) (Node 2).

The KSV specified in the curriculum are translated into assessment standards (Node 3).

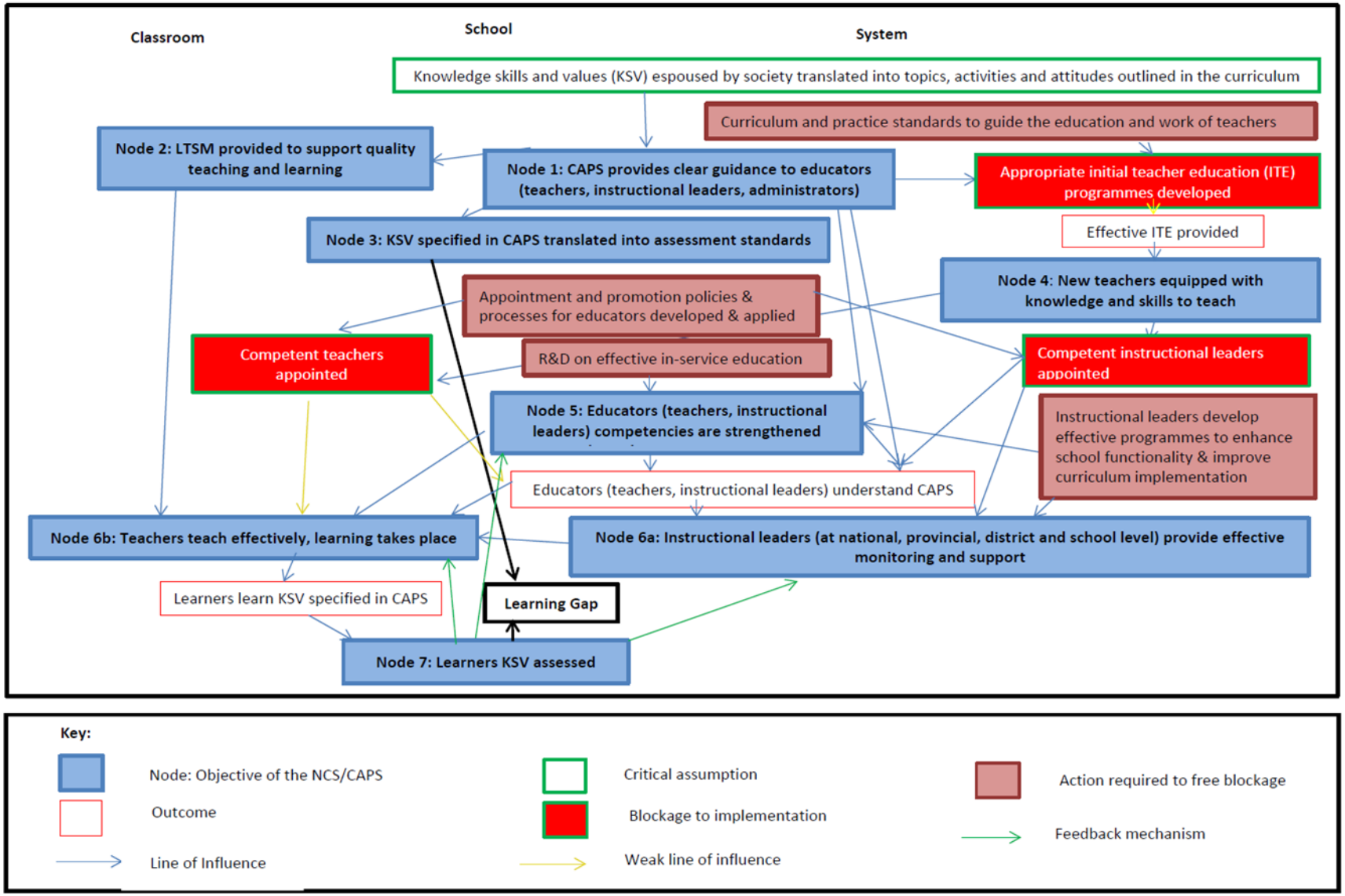
The curriculum (Node 1) AND curriculum and practice standards which guide the education and work of teachers inform the development of appropriate initial teacher education (ITE) programmes (Node 4), which are effectively implemented, resulting in new teachers being equipped with the knowledge and skills required to teach the curriculum.

The curriculum (Node 1) and R&D inform the development of appropriate in-service training programmes for instructional leaders and teachers (Node 5). These programmes are also informed by the analysis of learner assessment data (Node 7) and the learning gap. In-service training for educators is also informed by input from instructional leaders regarding the enhancement of school functionality and improvement of curriculum implementation.

The application of policies and processes regarding the appointment and promotion of educators results in the appointment of competent instructional leaders, who understand CAPS. Provided appropriate in-service training is provided (Node 5), these leaders will be able to develop effective programmes to enhance school functionality and improve curriculum implementation and support and monitor teaching (Node 6a). The monitoring and support provided is also informed by the analysis of learner assessment data and the learning gap (Node 7).

The application of policies and processes regarding the appointment and promotion of educators results in the appointment of competent teachers, who understand CAPS. Provided LTSM is available to support teaching and learning (Node 2), appropriate in-service training is provided (Node 5) and effective monitoring and support is provided by instructional leaders (Node 6a), teachers will teach effectively and learning will take place (Node 6b). Teaching is also informed by the analysis of learner assessment data and the learning gap (Node 7).

Figure 8: Revised Theory of Change



If teaching is effective (Node 6b) and in line with CAPS, learners will learn the KSV specified in CAPS. This is ascertained through learner assessment (Node 7). Learner assessment measures the difference between what learners know and can demonstrate and the standards which are expected (Node 3). The difference between the measurement and what is expected is the learning gap, which informs the provision of in-service training (Node 5), monitoring and support (Node 6a) and teaching practice (Node 6b).

The TOC spans several levels, vis-à-vis: classroom, school, district, provincial and national (subsumed under the label "system"). Figure 8 is, of necessity, at a relatively high level of abstraction and without substantive detail. Each node could be expanded into a more detailed TOC.

The interventions shown in Figure 8 should be initiated simultaneously and undertaken in parallel, taking into account the interdependencies described above. Currently, many of the initiatives being undertaken are proceeding largely independently of each other and there is a need for greater communication and coordination.

5.5 Q5: Based on the likelihood of achieving the outcomes, is the conceptualisation of CAPS and the systems for implementing it relevant and appropriate for the context it operates in?

The current evaluation found no systematic association between indicators of good practice and school performance in the schools visited, even though they were selected on the basis of significant differences in performance. In primary schools, this is most likely due to the unreliability of ANA scores in assessing the performance of any school, due to a variety of reasons, both technical and administrative. A second complicating factor is that the schools studied are not coherent organisations with respect to curriculum delivery. In the absence of a coordinated instructional leadership programme, teacher behaviour is idiosyncratic and highly variable within any school: excellent teachers and those who are highly ineffective spend whole years separated by a classroom wall, oblivious to what is happening next door. As a result, some teachers in the school may be producing excellent results, while the learners of others score very poorly. How is one to judge the quality of *school* performance under these conditions?

Since the NSC results are more reliable than the ANA scores, one might argue that the selection of high schools for the present evaluation would more accurately reflect school level performance and that therefore systematic differences between high- and low-performing high schools in the sample would be apparent. But here, too, few, if any, differences in the curriculum and pedagogic practices between H and L high schools were discerned by the evaluation. The explanation here might be that relatively good NSC performance may be obtained through cramming during the Grade 12 year (holiday schools, trial examinations, early-morning or evening classes), against a background of very poor general institutional functionality. The point is amply illustrated by the case of School X, described above as exhibiting extremely poor time management practices (**Box 5**), but which was classified during the sampling process as a 'high-performing' school.

However, what is striking about a number of differences that do emerge from the data is a distinct rural disadvantage: with one exception (DPRO(L)), rural schools were generally more poorly resourced and performed more poorly than their urban counterparts on a number of indicators. This begs the question: should a 'watered-down' version of CAPS be implemented in rural contexts, or indeed in Quintile 1-3 schools, since, as a group, they are disadvantaged compared with those in Quintiles 4 and 5? Such views found no favour among system level respondents, who said that rural children live in a global world and they need to learn to navigate it, whether they stay in their rural homelands, or, more likely, migrate to towns and cities.

It would seem that a far more equitable approach to the problem of rural disadvantage is to strengthen rural institutions and expand current mechanisms designed to attract the best educators to rural areas. Part of this project would be to make rural towns, many of which are manifestly badly managed at municipal level, more attractive places to live in, through the provision of better services.

5.6 Q6: Are there any gaps and challenges in the CAPS design and content? If any, are they hampering implementation?

It has become a cliché that South Africa has excellent policies, but indifferent application leads to low and inefficient impact. This idea was applied to the implementation of CAPS, in one or other form, by respondents to this evaluation at all levels of the system. The present evaluation confirms this characterisation and identifies the two biggest obstacles to implementation as institutional dysfunctionality (exemplified by the use of time) and poor teacher knowledge. These factors have nothing to do with the design and content of CAPS. While it is true that CAPS could do with some tweaking (the section on assessment stands out in this regard, as does the suggestion to reduce the content somewhat), documents could be better distributed and schools more frequently maintained, important as these resources are, their effects on learning pale into insignificance when compared to the very inefficient use of the more fundamental resources of time and educator expertise.

Teacher shortages also pose serious inhibitions to learning, although the shortages identified (section 4.1.6) in sample schools may be more a question of teachers being inequitably distributed, with oversupplies in some areas and chronic undersupplies in others. Without a competent teacher working with her class(es) for the full timetable, week in, week out, year in, year out, no curriculum can be properly implemented.

A third area requiring closer investigation is the supply and use of LTSM to schools. There was consensus in many schools that textbook shortages occur, many of them severe. Yet provinces budget and, in most cases, spend significant sums on LTSM annually. What can be responsible for this anomalous situation? Are books so badly managed in schools that top-up supplies cannot keep pace with annual losses? Or are the books stored somewhere, out of sight and out of mind of HODs and teachers alike? A third possibility is that, unlike the DBE workbooks, which most teachers follow sequentially, teachers find textbooks more difficult to use and tend to forget about them, preferring to use the more accessible workbooks. Whichever of these interpretations is correct, promoting the more frequent use of DBE workbooks, which teachers are already using in preference to other materials, would provide an excellent starting point.

5.7 Q7: How should the CAPS design and the systems for implementing it be strengthened?

The twin elephants in the machine of schooling – inefficient use of time and scarcity and inappropriate deployment of expertise – slow the cogs of learning to a crawl. The first is located in a culture which permeates schools in Quintiles 1-3 and whose adherents, while condemning the patterns of behaviour that they themselves maintain, explain this away in terms of factors beyond their control. The educational term for this kind of behaviour is ‘lack of agency’, the inability to do what one can under the circumstances and to fall into passivity, blaming an inability to adhere to the timetable on a lack of resources, parental apathy, learner indiscipline or union interference.

Passivity is probably linked to the poor education and low knowledge resources of many of the teachers who participated in the evaluation. Who would want to go to class, knowing s/he does not understand much of the work s/he is supposed to be teaching? It seems, therefore, that the starting point for a rejuvenation of the school system is to increase educator knowledge resources.

Effecting significant change of school performance will require a system-wide change process, implemented with consistency and commitment over this time. Three measures are at the

disposal of policy makers to address capacity constraints among educators. First, promote measures to improve the quality of ITE by paying attention to the size, shape and substance of pre-service education and training. Second, ensure that the large but largely ineffective INSET or CPD system is placed on an R&D, evidence-based trajectory through allocating adequate resources for evaluation, research and development and basing the design of programmes on research results. Third, as part of systematically building a culture of excellence, recruitment and promotion procedures should be strengthened, using expertise as the primary criterion for appointments and adopting more objective selection techniques. Each of these measures is important in its own right; together they form a coherent strategy to build the human resources necessary to deliver a high-knowledge/high skills curriculum like CAPS.

5.7.1 Initial Teacher Education

It seems that universities are educating teachers better than many of their college predecessors did, but the latest research indicates that current ITE programmes are failing to adequately equip new teachers for the demands of the school system in a number of important ways. These challenges are being taken up by the DHET and DBE, in collaboration with the university sector, through the European Union funded PrimTEd project. It goes without saying that the effects of improved teacher preparation on systemic performance will take years to have a significant systemic effect, but this is the long-term, sustainable solution to the problem of low educator capacity.

5.7.2 Continuous Professional Development

The public sector budgets in excess of R1bn per anum for CPD, while the private sector commits a similar amount. Yet little is known about the effects of this spending. Without understanding the effects of intervention programmes, there is a danger of simply repeating the same mistakes over and over. Considering the unspent funds in government's CPD budget, there cannot be an argument that no money exists for programme evaluation. Just five percent of the training budget would amount to R50 million, which could very fruitfully be used for assessing project impact and mechanisms of change. This investment is likely to leverage savings in terms of money spent on more effective programmes and the elimination of those that serve no purpose other than to waste the time of participants and the hard-earned rand of the South African taxpayer.

5.7.3 Best use of existing human resources

Given the centrality of the *quality* of curriculum leadership provided by school and district level officials, it becomes more important than ever to institute a more efficient system for selecting educators for promotion posts. It is also important to minimise corrupt practices. Both goals will be served by instituting formal procedures for selecting staff for promotion, including psychometric testing and the inclusion of HR and subject experts, with voting authority, in selection committees. These measures will not yield results immediately, but will lay the foundations for medium- to long-term systemic restructuring and sustainable improvement.

5.7.4 Improving time management in schools

It has been argued above that increasing teachers' knowledge resources is likely to impact not only on the quality of their teaching, but also on their attitudes: teachers are likely to gain more satisfaction from doing a job well and be more enthusiastic about going to class. At the same time, public perceptions of teachers will improve as learners begin to achieve higher comparative scores and the status of the profession rises. However, it could take 20 years for such a tipping point to be reached. More coherent and supportive instructional leadership practices can stimulate teachers as they observe each other applying new pedagogical strategies learnt from their peers. This is the true meaning of CPD.

At the same time, recalcitrant schools need to be engaged with a firm hand. It is the duty and responsibility of circuit managers to ensure that schools follow the timetable; abdication of responsibility in this regard as shown by the official in **Box 5** is disconcerting, all the more so because such behaviour seems likely to be fairly common. Circuit managers and school

principals should be involved in a structured programme to address this problem; principals who are unable to perform their allocated leadership roles should be taken through appropriate training, mentorship and, ultimately, disciplinary procedures. The same should apply to district officials who are unable to maintain their leadership roles adequately. Discipline and dedication need to be prioritised in building the capable state on which effective implementation of the curriculum rests.

5.7.5 Change the model of subject advisory services to teaches

It is a highly inefficient use of their time for subject advisors to spend significant time visiting teachers in schools. Under this system, they cannot spend time with more than a small fraction of teachers in the schools under their jurisdiction, and the amount of time spent with each teacher will be insignificant. It is proposed that subject advisors rather work with school-level HODs, coaching them to assist the teachers in their respective schools. In-school professional development, led by HODs and linked to the daily work of teachers and the specific strengths and weaknesses in each school, would be a far more efficient way of developing teacher capacity. Under such a system, subject advisors could meet with HODs at a central venue, say once a month, working with them on matters such as the establishment and maintenance of PLCs in the school, moderating test papers, analysising test scores, peer learning from classroom observations, and the like.

Considering the centrality of assessment, both systemic and formative, to the *Action Plan to 2019* and the design of CAPS, assessment requires particular attention. Evidence from the present evaluation indicates that some district- and school-level educators are beginning to pay more attention to assessment, but there is a general sense among educators at all levels that the formative purposes are relatively neglected, at least partly because of low levels of content knowledge and PCK on the part of teachers. Assessment must therefore serve as a focus of attention for both CPD and instructional leadership processes in schools. In this regard, the present crossroads occupied by policy on the ANA presents an opportunity to radically overhaul the system, integrating the ANA more closely with district, school and classroom level processes and providing a coherent assessment regime which powers teaching and learning to new heights.

6 CONCLUSIONS

The purpose of the implementation evaluation was to evaluate whether the curriculum has been implemented as specified in the Curriculum and Assessment Policy Statements (CAPS) and how implementation can be strengthened.

There is convincing evidence that the performance of the school system is improving. Since this evidence began to appear in 2011, with rising TIMSS scores, it is likely that performance was influenced by factors in place prior to the implementation of the *Action Plan to 2019* and CAPS. Most encouragingly, data from TIMSS and the NSC results indicate that the equity gap has been narrowing over the last 5-7 years.

The purpose of the discussion below is to examine the extent to which the goals of CAPS have or have not been achieved through the lens of six evaluation criteria, which are also used to explore ways of improving implementation. The criteria are: effectiveness; appropriateness; equity; efficiency; impact; and sustainability. The first four of these are most immediately relevant, since this is not an impact evaluation, but one focusing on implementation. Nevertheless, some evidence is available regarding the *likely* impact and sustainability of the curriculum.

6.1 Effectiveness

The criterion of effectiveness assesses the extent to which an intervention achieves its intended objectives and outcomes and identifies key factors influencing the achievement or non-achievement of these. In short, is CAPS achieving what it sets out to? Which brings us to reflect on the central aim of CAPS, which is:

….equipping learners, irrespective of their socio-economic background, race, gender, physical ability or intellectual ability, with the knowledge, skills and values necessary for self-fulfilment, and meaningful participation in society as citizens of a free country.

(DBE, 2011a: 3)

The short answer to the question *Is CAPS being effective?* is that it is too soon to say. An undertaking of this magnitude will take up to 10 years to begin to show significant effects, starting from early in the next decade. However, it is likely that the interventions which have been rolled out since 2011 – including the workbooks, the promulgation of CAPS and an increased focus on continuous professional development – are reinforcing the performance improvements which began showing in 2011. Evidence for this conclusion from the present evaluation, which replicates and supplements the findings of earlier studies, includes widespread agreement that CAPS provides far better guidance to educators than the NCS did; that the workbooks are not only appropriate but are the most widely used resource in primary schools; and that instructional leadership at all levels of the system, especially in schools, appears to be gaining traction, albeit very slowly.

However, there is also widespread agreement, including the Minister's own view, that the system continues to underperform and that things must be significantly improved. In other words, the purposes of CAPS have not yet been achieved. Evidence from the present evaluation is that accelerating the pace of improvement is dependent on the five key interventions discussed above: improving the quality of initial teacher education, instituting a competence-based system of staff promotion, adopting an evidence-focused approach to CPD, ensuring that teachers are in class for the duration of the time-table every day, and changing the model of subject advisory services in support of teachers.

6.2 Appropriateness

The relevance of an intervention is a measure of the extent to which it is suited to the priorities of the target group. We prefer the term appropriateness, which is used in conjunction with relevance, but also addresses the tailoring of interventions to local needs, priorities and skills. The question is whether CAPS is achieving its high-knowledge, high-skills aims in Quintile 1-3 schools. While there is firm evidence of a slow improvement in the system, it seems that CAPS is unlikely to achieve its ambitious goals under present circumstances. However, in this respect, CAPS is no different from any other curriculum which is likely to suffer the same fate under current conditions of poor time management and weak educator knowledge.

Would it hasten implementation if the curriculum were redesigned? One possibility would be to replace CAPS with a simpler, less ambitious curriculum more suited to the knowledge resources of teachers and the impoverished home circumstances of most learners in these schools. This would inevitably lead to a situation in which the present two track school system is cast in stone, with Quintile 1-3 learners on a permanent low road with no prospects of escaping poverty through education. This is an unthinkable option and the only alternative is to strengthen implementation across the board, through better time management and instructional leadership in schools and building teacher capacity.

This is not to say that CAPS is not open to improvement in terms of its design. Indeed, a number of respondents pointed out problems in the assessment section of the curriculum documents; and the DBE is currently working on refinement of this section. Any improvement of CAPS with respect to assessment should be linked to both a redesign of the ANA and to systematically focusing instructional leadership practices, both within the school and without, on the use of assessment processes and data to improve instruction. These developments, in turn, should be linked to systematic CPD programmes, both in-school and from the district, directed toward assisting educators (especially SAs, HODs and teachers) to design appropriate assessment tasks, analyse the results and remediate areas of weakness. At the same time, the number of formal assessment exercises in a year should be reduced. Ways of

doing this could be for the ANA to replace one of the term-end sets of tests, for the ANA to be written less frequently or both.

There are also a number of voices insisting that CAPS contains too much content and that content should be reduced in order to allow the development of deeper understanding of key topics. This assertion should be investigated, but on the strict understanding that the object of the exercise is to tighten the curriculum and not to institute another round of major reform.

6.3 Equity

Equity refers to fairness and justice. As an evaluation criterion, it is used to consider the extent to which the implementation of CAPS is fair and does not exacerbate existing inequalities. The South African school system is manifestly inequitable, with children from more affluent homes out-performing their rural and township counterparts by at least two years of schooling by the end of Grade 5. Rural children are particularly disadvantaged and this was evident in schools in the poorest and most rural district in the sample selected for the present evaluation. The latest round of TIMSS results indicates that the poorest-performing provinces are improving more rapidly than those already performing at moderate levels, indicating that inequality has reduced somewhat in the four years between 2011 and 2015. The next round of TIMSS results will indicate to what extent the 2015 results were anomalous or indicate a trend. Nevertheless, the TIMSS reports regularly point out that South African learners continue to perform below expectations, given the resources supplied to the system. This is not the fault of the curriculum, but due to systemic, non-curriculum causes. CAPS holds the promise of narrowing existing inequalities, on condition that it is implemented far more effectively and efficiently than is currently the case.

6.4 Efficiency

Efficiency is a measure of the extent to which the ratio of inputs - such as funding and human resources - required to achieve the desired outputs and outcomes are economical and productive. The implementation of CAPS in the majority of schools in the sample is grossly inefficient, with part-days and whole days wasted on non-timetable activities. Progress is further slowed by the pedestrian pace of many lessons and activities invoking low cognitive demand of learners, no doubt a function of teachers' own poor grasp of the subjects they are responsible for. Consequently, the time expended on teaching is out of all proportion to the learning progress made.

HODs claim, often with support from teachers, to undertake many monitoring activities. Yet much of this activity is 'going through the motions', completing monitoring forms and other forms of 'evidence', while having little impact on teaching and learning. This is another source of inefficiency: HODs could do so much more with the limited time they have available, such as listening to Grade 1-3 learners reading individually and showing teachers how to apply the EGRA tests.

Similarly, SAs can spend a whole day travelling, paying superficial visits to at most two or three of the scores of schools in their charge. A better way needs to be found to optimise the expertise of these key curriculum leaders. It would be a far more efficient use of scarce resources to spend concentrated time working with HODs at a central venue. Key curriculum implementation systems which HODs need assistance to build in their schools include organising grade- and subject-based PLCs, using classroom observations constructively, and building formative assessment practices into daily lessons.

Another important efficiency question concerns in-service training: are the considerable resources currently spent on CPD receiving optimal traction? Most respondents had serious reservations on this question; and it is possible that the majority of these funds are, at best, wasted and, at worst, counterproductive in that they further reduce the time teachers are able to spend in class. On the other hand, some interventions may be having significantly positive effects. Until we start investigating the design, implementation, impact and unintended

consequences of school and teacher development initiatives, we are simply groping in the dark.

Finally, the long-term future of the South African school system rests heavily on the extent to which universities are training teachers to address the demands of Quintile 1-3 schools. There is much evidence to indicate that the four-year BEd degree could be far more efficient if it focused more explicitly on Literacy and Mathematics Instruction for primary schools and the pedagogical content knowledge of all prospective teachers. Of these, the overriding priority must be to develop a programme for teachers to teach reading and writing effectively in the FP and IP, since all other school learning depends on literacy proficiency; inexplicably, it is something the universities appear to be paying little heed to at present.

6.5 Likely Impact

Impact refers to the long-term effects produced by the intervention, whether directly or indirectly, intended or unintended. As an implementation evaluation, the present study did not explicitly look for evidence for the impact of the CAPS. In any event, as indicated, it is too soon to expect the new curriculum to have any noticeable effect on learning. However, a consideration of its *likely impact* does offer a fruitful avenue in the search for ways of improving the design and implementation of CAPS. No curriculum is likely to have an impact on the inequity gap exhibited by the South African school system in the short term. The gap is only likely to be narrowed significantly under sustained implementation of the curriculum over many years. Stability and continuity in the fields of policy and administration are key to long-term change.

6.6 Sustainability

Sustainability is concerned with the continuation of benefits from the intervention after major development assistance has ceased. Is such stability and continuity sustainable? A global view of curriculum developments in the school sector over the last two decades reveals a great deal of change and discontinuity in the years 1994 to 2009. This was followed by a stock-taking exercise and consolidation phase and, since the institution of CAPS in 2011, the system has stabilised. It is important to keep this history in view when considering curriculum reform and to keep changes to a minimum while searching for ways of optimising implementation.

However, the area of human resource management shows very patchy achievement across the system, with some provinces and even the national department undergoing times of sustained instability, with frequent changes of leadership and extended periods of senior officials in acting positions. In addition, the evaluation heard evidence, at all levels, of widespread nepotism and corruption in the promotion of staff. Even if these perceptions are only half true, such perceptions create their own reality, and no self-respecting professional educator can be expected to give of their best in an institution in which she does not have respect for many of her leaders and peers. In short, less than optimal human resource management does not promote the development of the well motivated and efficient civil service requirement for sustainable change.

7 RECOMMENDATIONS

Five **Main Recommendations** arise from the foregoing analysis, based on the five interventions proposed in the Revised TOC. The recommendations and their supporting sub-recommendations cannot be seen only in a technical sense. Implementation of the Revised TOC must be located within and energised by a vision of school excellence, a culture of service and a strong sense of individual and institutional agency propelled from the highest political levels. There is likely to be resistance, both political and administrative, to certain elements of the programme and it will require clear and consistent political leadership over at least a decade, coupled with strong administrative protocols and practices, to follow the interventions through to achieving the capable state envisaged by the NDP.

R1 The DBE, DHET, SACE and universities should devise curriculum and practice standards to guide the education and work of teachers.
R2 The DBE must review and apply merit-based appointment and promotion policies and processes for educators.
R3 The DBE must work with universities, NGOs and corporate partners to conduct research on effective in-service education and training for teachers.
R4 The DBE, in collaboration with Provincial Departments of Education must develop an effective programme to achieve school functionality.
R5 The DBE and Provincial Departments of Education should develop an effective programme to support school leaders and teachers in curriculum implementation.

The **Detailed Recommendations** which follow in **Table 26** are aimed at operationalising the five Main Recommendations.

Table 26: Detailed recommendations

Recommendation	No	Sub-recommendation
R1 DBE, DHET, SACE and Universities should devise curriculum and practice standards to guide the education and work of teachers. **Motivation:** The work of learners in acquiring the KSV of the curriculum is directed and coordinated through the work of teachers, the competencies for which, in turn, must be inculcated and regulated with a view ultimately to facilitating learning in classrooms.	**R1.1**	**Implementation of Umalusi recommendations regarding CAPS** It is recommended that DBE urgently consider the recommendations made by Umalusi regarding the maths and English (HL and EFAL) FET curricula. Following an evaluation of CAPS in 2014 it was recommended by Umalusi that this process be completed within 2 years.
	R1.2	**Raise the standard of EFAL in all phases** Evidence indicates that raising the standard of EFAL - through the inclusion of higher cognitive functions in the NSC, other common assessment exercises, and LTSM in all four phases – would enable learners to strengthen performance across the curriculum. As such, this sub-recommendation should receive the highest priority.
	R1.3	**Review of CAPS assessment section** The current review by DBE of Section 4 (Assessment) in the CAPS documents is supported. It is recommended that the following be included in the terms of reference for the review: • the number of formal tasks required by phase, and • clarifying the current confusion among teachers, HODs and SAs around levels of difficulty. A good way of dealing with this problem is by providing teachers with examples of items which exemplify different cognitive processes and levels of difficulty.
	R1.4	**Review of CAPS content** It is recommended that DBE commission a review of the CAPS documents with a view to reducing content where appropriate. The priority should be on depth of understanding of the most important strands of the respective school subjects. DBE has identified this as a priority, and it is recommended that a wide range of experts be invited to participate in the review. This exercise should not result in major curriculum change. One way of addressing content overload, if it is found, is to label certain topics in CAPS as 'optional', or 'for further study', etc.
	R1.5	**Distribution of NCS documents**

Recommendation	No	Sub-recommendation
		School level audits of NCS documents among teachers should be undertaken every three years, and supplies to schools topped up.
	R1.6	**Review of national assessment for GET** Regarding the redesign of a national assessment instrument for the GET Phase, it is recommended that DBE, in partnership with the provinces and in discussion with psychometricians and other assessment experts, drawn from both the public and private sectors: • Give careful consideration to the dangers inherent in implementing a poorly designed *summative assessment system* focusing on accountability (such as NCLB), taking account of the research; undertake a cost/benefit analysis before embarking on such an exercise. • Undertake a cost/benefit analysis before embarking on a *systemic evaluation* exercise. Particular consideration should be given to the marginal benefits of such a programme, over and above what is currently learned from SACMEQ, TIMSS, and PIRLS. • Pay particular attention to improving *formative assessment* at school and classroom levels. This is a central element of effective pedagogy, and formative assessment holds the key to linking the work of teacher educators, system-level officials, school leaders, and teachers. More detail on how to operationalise this recommendation is given in Sub-recommendations R1.7, R2.1, 3.1, and 5.1 – 5.4.
	R1.7	**Teacher education and management** DHET should continue to lead the PrimTEd programme, with strong support from DBE, while SACE should continue to lead the initiative designed to develop professional practice standards for teachers. It is recommended that DHET, CHE, EDF, DBE and SACE communicate with respect to their work regarding curriculum content standards for ITE, professional practice standards for teachers, standards for the accreditation of CPD programmes, and standards for the assessment of educators'.
R2 DBE, provinces and districts must review and apply merit-based policies and processes for the appointment and promotion of educators **Motivation:** The delivery of education is a complex and highly technical task requiring on the part of educators a sophisticated knowledge which combines disciplinary (e.g., maths, English) and pedagogic (how to	**R2.1**	**Development of a merit-based promotion system** It is recommended that DBE, in collaboration with provinces: • Gives priority to instituting a competence-based system for the appointment of principals within three years. The lessons learned in WC and GP should be built on. • Develops sets of standards for subject advisors and heads of department, linked to the Standards for Principalship. • Pilots a merit-based approach to the appointment of school-level HODs and subject advisors.
	R2.2	**Implementation - provinces** Provincial officials should give particular attention to developing protocols for implementing the merit-based approach, in discussion with DBE.
	R2.3	**Implementation – districts**

Recommendation	No	Sub-recommendation
convey the discipline) knowledges. A key tenet of the NDP vision is that the capable state which delivers high quality services to its citizens is driven by the most responsible and competent people, selected according to their capacity to undertake the designated job.		Circuit managers and subject advisors should support principals and monitor implementation of the promotions policy at school level, through direct observation and intervention where necessary.
R3 DBE must work with universities, NGOs and corporate partners to conduct research on effective in-service education and training for teachers. **Motivation:** The CPD system is 'flying blind': while large sums are spent annually by public, private and international sources, little is known about the effects this activity. DBE needs to take the lead in directing these efforts towards more efficient solutions, through the intelligent use of information.	**R3.1**	**Promote a research-focused approach to CPD** It is recommended that DBE and private sector donors allocate at least 5% of any training initiative to R&D. Areas requiring the most urgent attention are programmes which enable primary school teachers to teach literacy and basic maths, and to practice formative assessment in support of these disciplines.
	R3.2	**Knowledge management** DBE should establish a Directorate for Knowledge Management, in the Research Coordination, Monitoring and Evaluation Chief Directorate. The task of the Dir: KM will be to collate research information on CPD and cumulatively build a knowledge base concerning the design and implementation of successful CPD programmes.
R4 DBE in collaboration with Provincial Departments of Education must develop an effective programme to achieve school functionality **Motivation:** Government, from the highest level, has been condemning the poor use of time in schools since 1998. Until there is a movement from rhetoric to action,	**R4.1**	**Developing a plan** DBE should work with provincial officials to develop an effective programme to achieve school functionality. Adequate resources, including transport to schools for district officials, must be allocated to the programme.
	R4.2	**Implementation – provinces** Each province should develop an implementation plan for achieving school functionality, which should include unannounced visits to schools by circuit managers. The statutory procedures governing the relationship between leaders and their subordinates are clear and even-handed in recognising both the responsibilities of managers and the rights of individuals. But in the end policy must be followed, even if it requires taking disciplinary measures against repeat offenders.
	R4.3	**Implementation - districts**

Recommendation	No	Sub-recommendation
schooling cannot undergo the accelerated rate of efficiency proposed by the NDP. While the ELRC provides an important space for cooperation, at the end of the day activity cannot be held up indefinitely by any one party, and government needs to exercise its authority to move forward.		It is recommended that circuit managers monitor implementation of time-use policy at school level, through direct observation. Principals and circuit managers who cannot maintain effective time management practices in the institutions under their jurisdiction must be rendered assistance, while repeated inability must lead to redeployment or dismissal, as prescribed by the law.
	R4.4	**Implementation – schools** School principals must ensure adherence of teachers to CAPS timetable. Recalcitrant teachers must be disciplined.
R5 DBE and Provincial Departments of Education should develop an effective programme to support school leaders and teachers in curriculum implementation **Motivation:** Monitoring and supporting the work of teachers involves much more than checking teacher documents and training workshops: it should include directing the daily work of teachers through lesson study, peer observation, and the analysis of test scores.	**R5.1**	**Developing a plan** DBE should work with provinces to incorporate best evidence of effective CPD programmes into the planning and rollout of support activities, with particular attention to literacy, basic maths and the use of formative assessment to promote learning in these foundation disciplines.
	R5.2	**Implementation – provinces** Provincial level curriculum leaders should work with subject advisors on the design, implementation and evaluation of such activities.
	R5.3	**Implementation - districts** Subject advisors should work with school-level HODs, meeting regularly at a rotating central venue, on running in-school PLCs to focus on matters of curriculum, assessment and pedagogy. Particular attention should be given to using assessment data to identify learner misconceptions and pedagogical effectiveness in literacy and basic maths.
	R5.4	**Implementation - schools** Principals should coordinate and direct the team of HODs within the school to promote engagement by teachers with curriculum issues. The promotion and quality assurance of PLCs in the relevant phase/subject areas should be central to the principal's role in exercising instructional leadership, as envisaged in the Standard for Principalship. It is recommended that HODs: • work with teachers in in-school PLCs to focus on formative assessment and effective pedagogy, in this way strengthening teachers' understanding of and skill in applying PCK in class, constructing test papers, and analysing the results. • Part of this exercise must be to shift the focus of monitoring from inputs to outcomes, for example, using the Early Grade Reading Assessment (EGRA, and the Early Grade Maths Assessment (EGMA) tools to test directly the literacy and numeracy skills of learners.

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APPENDIX A: LOGFRAME

The logframe referred to in section 3.2 is as follows:

	Logical hierarchy	Objectively verifiable indicators (OVI)	Means of verification; source of verification information	Assumptions
Goal	*To ensure that children acquire and apply the knowledge and skills specified in the curriculum in ways that are meaningful to their own lives*	% of learners who complete schooling. % of learners who, at the end of schooling, enter Further Education and Training (FET) or obtain jobs.	DBE data & reports on school completion. Higher Education Management Information System (HEMIS) data on university enrolment. Statistics South Africa (StatsSA) data and reports on employment. Research literature	The curriculum gives expression to knowledge and skills worth knowing. *This assumption was not tested*. The school system is successful in inculcating knowledge and skills. *The evaluation identified challenges in this regard and makes recommendations as to how these could be addressed.*
Objective 1: To provide clear guidance to teachers on the knowledge, skills and values to be taught in South African schools which will inform good pedagogy				
Long-term outcome	LO1 Teachers use CAPS documents regularly, to guide daily and weekly planning.	% lesson plans reviewed which are aligned with CAPS.	School document review.	New teachers will be oriented to CAPS (see Objective 5) HODs in schools are providing support to teachers on CAPS (see Objective 5).
Inter-mediate outcome	IO1 Educators are clear about what needs to be taught in South African schools.	Teacher performance in assessments which measure curriculum knowledge. Teacher knowledge of CAPS, as demonstrated in interviews.	Teacher tests Teacher interviews	CAPS documents are accessible and understandable. Teachers can read and understand CAPS. *The evaluation found this assumption to hold true.*
Outputs	OT1.1 CAPS documents.	Existence of CAPS document	Document review	
	OT1.2. Distribution of CAPS documents to districts and schools.	% district officials who have ready access to CAPS (their own hard or electronic copies). % teachers who have ready access to CAPS (their own hard or electronic copies, or have free access to school/district copies).	District Subject Advisor interview Teacher interview	

	Logical hierarchy	Objectively verifiable indicators (OVI)	Means of verification; source of verification information	Assumptions
Activities	A1.1 DBE produces CAPS which incorporates recommendations of the Ministerial Task Team.	CAPS documents address the recommendations of the Ministerial Task Team.	HSRC evaluation Public records: DBE Annual Reports and other government publications regarding each of the support systems	
	A1.2 DBE distributes CAPS documents to districts and schools.	See indicators for OT1.2	N/A	Distribution systems are effective. *The evaluation found that the distribution systems are generally effective, although plans need to be made to supply new teachers and to top up due to natural attrition.*
Objective 2: To provide appropriate LTSM to teachers and learners which will support quality teaching and learning				
Longer-term outcome	LO2.1. Teachers use LTSM as an integral part of the teaching and learning process to support quality teaching and learning.	Frequency of literacy activities undertaken in class (# activities in the year to date as compared to CAPS guidelines). Nature of literacy activities undertaken in class (type of literacy activities undertaken as compared to CAPS guidelines). Frequency of writing exhibited in learner books as compared to CAPS guidelines (disaggregated by subject). Nature of writing exhibited in learner books as compared to CAPS guidelines (depth, and focus area, disaggregated by subject).	Learner book analysis Learner book analysis Lesson observations Learner book analysis Learner book analysis	LTSM are essential to the teaching and learning process *This assumption was not tested*.

	Logical hierarchy	Objectively verifiable indicators (OVI)	Means of verification; source of verification information	Assumptions
Inter-mediate outcomes	IO2.1 Teachers use workbooks and textbooks regularly in their classrooms for teaching and learning purposes.	% Grade 2 and 10 lessons observed in which textbooks were used. % Grade 2 lessons observed in which workbooks were used. Self-reported used of workbooks and textbooks by teachers in interviews.	Lesson observation Teacher and HOD interviews. Document analysis	
Short-term outcome	SO2.1 Teachers and learners have access to more and better quality LTSM.	% of learners having access to the required textbooks and workbooks for the entire school year (Action Plan to 2019 indicator).	Cross reference Action plan to 2019. School document review. Classroom observations Learner book analysis	
Outputs	OT2.3 Teachers and learners have access to DBE approved, CAPS-aligned workbooks.	See indicators for A2.5	N/A	
	OT2.4 Teachers and learners have access to DBE approved, CAPS-aligned textbooks.	See indicators for A2.5	N/A	
Activities	A2.1. The DBE develops appropriate workbooks.	Existence of workbooks which meet the requirements of good materials, as defined by Australian Council for Educational Research (ACER).	External evaluation by ACER	
	A2.2. Textbook developers develop appropriate textbooks.	# textbooks which meet the requirements of appropriate materials, as defined by the DBE.	DBE Catalogue of approved materials	

	Logical hierarchy	Objectively verifiable indicators (OVI)	Means of verification; source of verification information	Assumptions
	A2.3. The DBE delivers workbooks to schools.	Workbooks received by schools	Teacher, HOD and principal interview. School document review.	Distribution systems are effective. *The findings in this regard were inconclusive. This needs further investigation.*
	A2.4. Schools procure textbooks.	Textbooks received by schools	Teacher, HOD and principal interview. School document review.	Schools have adequate budget to procure textbooks. *The findings in this regard were inconclusive. This needs further investigation.*
Objective 3: To ascertain – through school level assessment - whether the knowledge skills and values (KSV) specified in CAPS are being acquired and desired outcomes achieved and take remedial action as required.				
Long-term outcome	LO3.1 Teaching is more effective as it is tailored to learners' areas of need.	Learner performance in National Senior Certificate (NSC) international comparative test programmes	Umalusi and DBE reports. Longitudinal tracking of results.	NSC, PIRLS, SACMEQ, TIMSS are valid and reliable tests of performance. *This assumption was not tested*. NSC, PIRLS, SACMEQ, TIMSS results are comparable horizontally (across the system) and vertically (over time). *This assumption was not tested, but the results are widely respected*.
Inter-mediate outcome	IO3.3 Gaps and weaknesses in learning are addressed through remedial teaching strategies.	Evidence that gaps and weaknesses in learners are addressed through remedial strategies.	Lesson observation. Teacher interview.	Weaknesses in terms of pedagogy will be addressed through Continuous Professional Development (CPD). See Objective 5.
Short-term outcomes	SO3.1 Teachers are aware of gaps and weaknesses in learning.	Teachers are able to demonstrate awareness of gaps and weaknesses in learning.	Teacher interview.	
	SO3.2 Teachers, HODs and subject advisors are aware of possible weaknesses in terms of pedagogy.	Teachers, HODs and subject advisors are able to demonstrate awareness of gaps and weaknesses in terms of pedagogy.	Teacher, HOD and subject advisor interview.	

	Logical hierarchy	Objectively verifiable indicators (OVI)	Means of verification; source of verification information	Assumptions
Outputs	OT3.1 & OT3.3 Formal and informal assessment tasks set and completed.	# Lessons observed which incorporate formal and informal assessment tasks. # Assessment tasks completed in line with CAPS requirements. % of assessments reviewed which are at the right level as outlined in CAPS.	Lesson observation Document review (teacher assessment records). Document review (teacher assessment records).	Teacher assessment records will be made available.
	OT3.2 Formal assessment tasks moderated.	Evidence that HODs have moderated formal assessment tasks.	Document review HOD and teacher interviews	
	OT3.4 Formal and informal assessment tasks marked.	Evidence that teachers have marked formal and informal assessment tasks.	Document review Teacher interviews	
	OT3.5 Formal and informal assessment tasks analysed.	Evidence that teachers, HODs and subject advisors have analysed formal and informal assessment tasks.	Document review Subject Advisor, HOD and teacher interviews	
Activities	A3.1 Teachers set formal and informal assessment tasks as part of their lessons.	See indicators for OT3.1 & OT3.3	N/A	Teachers have requisite disciplinary and PCK to interpret CAPS and formulate appropriate assessment tasks. *This assumption was found not to have held true.*
	A3.2 HODs moderate formal assessment tasks.	See indicator for OT3.2	N/A	HODs have requisite disciplinary and PCK to moderate. *This assumption was found not to have held true.*
	A3.3 Learners complete formal and informal assessment tasks.	See indicators for OT3.1 & OT3.3	N/A	
	A3.4 Teachers mark formal and informal assessment tasks.	See indicator for OT3.4	N/A	
	A3.5 Teachers, HODs and subject advisors analyse the results of formal and informal assessment.	See indicator for OT3.5	N/A	

	Logical hierarchy	Objectively verifiable indicators (OVI)	Means of verification; source of verification information	Assumptions
Objective 4: To equip new teachers with the disciplinary knowledge, PCK and practical competence to teach in line with CAPS				
Long-term outcome	LO4.1 More competent newly qualified teachers slowly improve the performance of the education system.	Performance of South African learners in SACMEQ, TIMSS and PIRLS.	SAQMEC, TIMSS and PIRLS reports.	There are enough newly qualified teachers obtaining jobs to make a difference at the level of the system.
Inter-mediate outcome	IO4.1 Newly qualified teachers meet the MRTEQ requirements on graduating.	# graduates from BEd and PGCE programmes accredited by the CHE.	HEMIS data. DHET and CHE reports.	MRTEQ provides adequate specifications to convey what is required for effective teaching. *This assumption was not tested via the evaluation, but research literature suggests that it does not hold true*. BEd and PGCE programme curricula meet the requirements of the MRTEQ *This assumption was not tested via the evaluation.*
Outputs	OT4.1 Student teachers graduate with BEd and PGCE.	# BEd and PGCE graduates	HEMIS data. DHET and CHE reports.	
Activities	A4.1 Student teachers follow Bachelor of Education (BEd) curricula and/or relevant Bachelors & Post Graduate Certificate in Education (PGCE).	# BEd and PGCE students enrolled.	HEMIS data. DHET and CHE reports.	
Objective 5: To strengthen teacher competencies (disciplinary knowledge, PCK and practical classroom knowledge) through CPD				
Long-term outcome	LO1 Teachers have the requisite disciplinary, PCK and practical classroom knowledge required to implement CAPS.	Competency of teachers in relation to: See objective 6B.	Lesson observations.	

	Logical hierarchy	Objectively verifiable indicators (OVI)	Means of verification; source of verification information	Assumptions
Inter-mediate outcomes	IO5.1 Weaknesses in terms of pedagogy (see Objective 3) are effectively addressed through CPD.	Evidence that weaknesses in pedagogy are being addressed through CPD.	Teacher, HOD and subject advisor interview. Document review.	Schools have CPD plans. *This assumption was found not to have held true.* HODs have requisite disciplinary and PCK to advise teachers and provide in-school CPD. *This assumption was found not to have held true.* Subject advisors are competent to support HODs and teachers. *This assumption was not explicitly tested. But there was widespread feeling amongst interviewees that it does not hold true.*
Short-term outcome	SO5.1 Instructional leaders (subject advisors, HODs) are knowledgeable in CAPS.	Subject advisors and HODs knowledge of CAPS, as demonstrated in interviews.	Subject advisor and HOD interviews.	Training was of sufficient quality and duration to equip subject advisors and HODs to support teachers and for teachers to understand CAPS. *This assumption was not tested via the evaluation.*
Outputs	OT5.1 Teachers, HODs and subject advisors trained in CAPS.	% Subject advisors interviewed were trained in CAPS. % HODs interviewed who were trained in CAPS. % teachers interviewed who were trained in CAPS. Quality of training, as reported by participants.	Subject advisor interview. HOD interview. Teacher interview. Subject advisor, HOD and teacher interview.	
	OT5.2 Teachers trained in identified areas of need.	% teachers interviewed who were trained in identified areas of need.	Teacher interview.	

	Logical hierarchy	Objectively verifiable indicators (OVI)	Means of verification; source of verification information	Assumptions
	OT5.3 Teachers supported in identified areas of need (e.g. mentoring, professional learning communities (PLCs) and assessment).	Evidence that analysis of formal and informal assessment tasks has informed in-school CPD Evidence of support provided by HODs	HOD and teacher interviews Document review HOD and teacher interview.	
	OT5.4 HODs supported to support teachers.	Evidence of support provided by Subject Advisors	Subject advisor and HOD interview.	
Activities	A5.1 DBE provides training to teachers, and instructional leaders in CAPS	See OT5.1	N/A	
	A5.2 DBE provides training to teachers and instructional leaders in areas of need identified through analysis of assessment results (see Activity 3.5)	See OT5.2	N/A	
	A5.3 HODs provide support (e.g. mentoring, PLCs and assessment) to teachers in identified areas of need.	See OT5.3	N/A	
	A5.4 Subject advisors support HODs wrt the provision of support to teachers.	See OT5.4	N/A	
Objective 6a: To provide adequate support from district and school level, to teachers to support effective teaching and learning				
Long-term outcome	LO6a1. Subject advisors and HODs provide ongoing/sustained quality instructional leadership.	HODs reporting that they receive ongoing, quality support from subject advisors. Teachers reporting that they receive ongoing, quality support from HODs.	HOD interviews. Teacher interviews.	

Inter-mediate outcome	IO6a1. Subject advisors and HODs provide quality instructional leadership.	Quality (usefulness) of support provided by subject advisors, as reported by HODs. HODs' monitoring and support role is clearly defined (in their job description. Quality (usefulness) of support provided by HODs, as reported by teachers. Reported gaps in terms of additional monitoring and support required.	HOD interviews. School records Teacher interviews. HOD and teacher interviews.	Subject advisors are suitably qualified and knowledgeable in the subjects they are supporting on. The ratio of subject advisors: teachers allows adequate support; subject advisors have transport and can reach schools. HODs are suitably qualified and knowledgeable in the subjects they are supporting teachers on. The ratio of instructional leaders: teachers allows adequate support. *The above assumptions were found not to hold true.* Quality is measured in terms of 4 dimensions: • Division of labour (leadership roles clearly defined and responsibilities allocated and monitored); • Basis of authority (management recruits specialised knowledge and experience regarding pedagogy, curriculum and evaluation) • Forms of solidarity (staff coheres around a professional ethic of responsibility for teaching and learning) • Instructional order (school leaders have an in-depth understanding of CAPS requirements, and drive a programme of planning,

	Logical hierarchy	Objectively verifiable indicators (OVI)	Means of verification; source of verification information	Assumptions
				monitoring and CPD). Hoadley and Galant's scheme for characterising 'epistemic instructional leadership is valid. *This assumption was not tested via the evaluation.*
Outputs	OT6a1. Monitoring and support provided to schools and teachers.	Frequency of subject advisor monitoring and support visits. Frequency of subject advisor monitoring and support activities by type (e.g. school visits, workshops, documents).	School and district records. Subject advisor, HOD & teacher interviews.	Records are available and are provided.
	OT6a2. Monitoring and support provided to teachers.	Frequency of support provided by HODs. Frequency of HOD monitoring and support activities by type (e.g. lesson observation, moderation of assessment, CPD provision).	HOD and teacher interviews. School and teacher records. School and teacher records.	Records are available and are provided.
Activities	A6a1. Subject advisors provide monitoring and support to schools and teachers	See OT6a1.	N/A	
	A6a2. HODs provide monitoring and support (e.g. classroom visits, checking teacher records and plans) to teachers	See OT6a2.	N/A	
Objective 6b: To strengthen teaching practices and enhance learning				
Long-term Outcome	LO6b1. Improvement in learning outcomes	The gap between expected (targets) and achieved learning outcomes. Longitudinal trends in learner performance over time (NSC, SACMEQ, TIMSS, PIRLS).	DBE and Umalusi. Umalusi, SAQMEC, TIMSS & PIRLS.	NSC and ANA scores are comparable horizontally (across the system) and vertically (in time)**.** *This assumption was not tested via the evaluation*

	Logical hierarchy	Objectively verifiable indicators (OVI)	Means of verification; source of verification information	Assumptions
Inter-mediate outcome	IO6b1. Learners acquire the KSV specified in CAPS	Learner performance in informal and formal school-based assessment. Learner performance in external tests (ANA, NSC).	School records. DBE and Umalusi.	School-based assessments are valid. NSC and ANA are reliable indicators of learning specified in CAPS. *This assumption was not tested via the evaluation.*
Short-term outcome	SO6b1. Teachers provide quality instruction	Extent to which teachers: • Use effective questioning techniques • Respond to learner questions appropriately • Use written assessment formatively • Provide model responses to learners • Give adequate time for practice • Progressively introduce new learning • Make efficient use of lesson time • Coordinate classroom resources and space • Manage learner behaviour constructively Assessment task are appropriate for subject and grade.	Lesson observation Analysis of class assessment tasks.	Coe et al.'s criteria for 'great teaching' are valid. *This assumption was not tested via the evaluation.*
Outputs	OT6b1. Work plans and lesson plans	% teacher interviewed who report using CAPS to plan lessons. % work plans reviewed which are in line with CAPS. % lesson plans reviewed which are aligned with CAPS.	Teacher interview Document review Document review	Work plans and lesson plans will be available.

	Logical hierarchy	Objectively verifiable indicators (OVI)	Means of verification; source of verification information	Assumptions
	OT6b2. Lessons	% coverage of work specified in CAPS. %of learners who cover everything in the curriculum for the current year on the basis of sample based evaluations of records kept by teachers and evidence of practical exercises done by learners. Link to Action Plan to 2019.	Learner book analysis	
Activities	A6b1. Teachers develop work plans and lesson plans according to CAPS	See indicator for OT6b1.	N/A	
	A6b2. Teachers teach in line with CAPS in terms of time allocation, breadth, depth, timetable.	See indicator for OT6b2.	N/A	

APPENDIX B: EVALUATION MATRIX

Evaluation questions and sub-questions	Instruments									
	D	P	SF	HOD	TP	TS	CO	TMP	TMS	TE
1. To what extent has CAPS been implemented?*										
1.1 Do districts assist schools to plan according to CAPS pacing specifications?	√									
1.2 Do schools plan timetable according to CAPS requirements?		√	√							
1.3 Do schools plan curriculum coverage according to CAPS pacing specifications?		√								
1.5 Do teachers plan curriculum coverage according to CAPS pacing requirements?										
1.11 Are teachers keeping up with CAPS pacing requirements?				√	√		√	√		
1.4 Do instructional leaders (district and school) use assessment as recommended by CAPS?	√	√								
1.13 Do teachers use assessment as recommended by CAPS?					√		√	√		
1.15 Are teachers pitching material at the recommended levels of cognitive demand?					√		√	√		
1.6 Do teachers have the LTSM recommended by CAPS?	√	√		√	√		√			
1.7 Do teachers use LTSM as recommended?				√	√		√			
1.8 Is time optimally managed at the school level?		√	√	√	√					
1.9 Is time optimally managed at classroom level?			√				√			
1.14 Do teachers exercise effective pedagogy in class? (as defined by the Six Characteristics of Great Teaching)							√			
1.16 Are FP teachers using an effective method for teaching literacy?				√	√		√	√		
1.12 Are learners writing at the recommended levels both quantitatively and qualitatively?					√		√	√		
1.10 Are minimum levels of school infrastructure and resourcing maintained?	√	√	√							
2. Do teachers understand CAPS and do they have the necessary capabilities and motivation to implement the National Curriculum Statements according to CAPS and associated policies?										
2.1 Do teachers possess adequate levels of content knowledge to implement CAPS?	√	√		√	√		√	√	√	√
2.2 Do teachers possess adequate levels of PCK to implement CAPS?					√		√	√	√	√
2.3 Do teachers understand the requirements of CAPS re planning, activities, LTSM, assessment?	√	√		√	√		√	√		
2.4 Are teachers motivated to teach CAPS?				√	√					
3. Are the support systems to support CAPS implementation working?										
3.1 What are the support systems to implement CAPS and how should they work?	√									
3.2 Are CAPS documents readily available to educators at all levels??	√	√	√	√	√					
3.3 Are LTSM readily available to teachers?	√	√	√	√	√		√			
3.4 Is the quantity and quality of curriculum support provided by Subject Advisors adequate?	√	√	√	√	√					
3.5 Are training programmes in the use of CAPS for educators appropriately designed?										
3.6 Was CAPS training provided to educators?	√	√	√		√					
3.7 Does the SMT provide adequate instructional leadership?	√	√	√	√	√				√	
3.8 Does the school maintain an effective in-school CPD programme?	√	√	√	√	√					
4. Is the theory of change working as expected? Based on how the theory of change is working, are we likely to see the planned outcomes of CAPS?										

Evaluation questions and sub-questions	Instruments									
	D	P	SF	HOD	TP	TS	CO	TMP	TMS	TE
4.1 What is the change theory of CAPS?										
4.2 Are the answers to Q1-3 unambiguously positive?										
4.3 If not, in which of the sub-questions are problems apparent?										
4.4 In the light of the two previous questions, is CAPS likely to meet its planned outcomes?										
5. Based on the likelihood of achieving the outcomes, is the conceptualisation of CAPS and the systems for implementing it relevant and appropriate for the context it operates in?										
5.1 Is CAPS appropriately designed?	√	√		√	√					
5.2 Taking account of any problems identified in Q4 and in the CAPS design and the implementation context, is CAPS appropriate?										
6. Are there any gaps and challenges in the CAPS design and content? If any, are they hampering implementation?	√	√		√	√	√				
6.1 Taking account of the answers to Q5, which factors are hampering implementation?										
7. How should the CAPS design and the systems for implementing it be strengthened?										
7.1 Based on the answer to Q6, how should the CAPS and implementation systems be improved?										
7.2 How should the CAPS implementation theory be revised to make it more likely that the planned/expected outcomes will be achieved?										
7.3 How should the CAPS change theory be revised to make it more likely that the planned/expected outcomes will be achieved?										

APPENDIX C: ADDITIONAL TABLES

Table 27: Time distribution in timetables (h/week)

Code	Total teaching time	G2 LOLT	EFAL	Math	ML
	23/27.5 h*	7-8h	2-3/4.5 h	7/4.5 h	4.5 h
APRH	23	7	3	7	
APRL	23	7	3	7.3	
APUO(L)	23	7	3	7	
ASRH	36		4.00	4.300	4.300
ASRL	29.08		4.30	4.300	4.300
ASUO(L)	35.08		5.00	5.000	5.000
BPUH	31.25	7	3	7	
BPUL**	6.25	2	7	7.3	
BPRO(H)	23	8	2	7	
BSUH	30.25		5.00	5	5
BSUL	29		5.00	5	5
BSRO(L)	29		5.00	5	5
CPRH	23.17	7	3	7	
CPRL	25.08	7	3	7	
CPUO(L)	23	7	3	7	
CSRL	30.75		5.00	4.000	4.000
CSRL(1)	28.75		4.08	4.080	4.080
CSUO(H)	31.25		4.08	4.080	4.080
DPUH	27.08	7	3	7	
DPUL	22.08	7	3	7.1	
DPRO(L)	23.75	8.2	2	7	
DSUH***	32.08		4.00	4.080	0.000
DSUL	32.08		5.00	4.080	4.000
DSRO(H)	25.67		4.58	4.580	4.580

* CAPS requirements: P/S in hours per week
** LOLT and EFAL figures apparently switched; apparent error in computing total teaching time
*** No Maths Lit offered

Table 28: Teacher term plans

Percent of teachers who produced plans	Number of schools									
	District A		District B		District C		District D		Total	
	Prim	Sec	Prim	Sec	Prim	Sec	Prim	Sec	Prim	Sec
100%			1	1	3	2	2	2	6	5
67%		1		2		1	1		1	4
33%		1						1		2
0%	3	1	2						5	1

Table 29: Availability and use of LTSM for EFAL, according to HODs

School	EFAL Textbook		EFAL Short Stories		EFAL Novel		EFAL Drama		EFAL Poetry	
	Everyday	More often	Everyday	More often	Everyday	More often	Everyday	More often	Everyday	More often
ASRH	✓					✓				
ASRL	✓									✓
ASUO(L)	✓									✓
BSUH	✓			✓		✓		✓		✓
BSUL		✓								
BSR(L)	✓									✓
CSRL								✓		✓
CSRL		✓								
CSUO(H)		✓				✓				✓
DSUH				✓						✓
DSUL	✓									✓
DSRO(H)		✓								✓

Table 30: Availability and use of LTSM for maths and maths lit, according to HODs

School	How often do you think the teachers use the available resources?							
	Maths or Mathematical Literacy Textbook		Maths or Mathematical Literacy Calculator		Maths or Mathematical Literacy Computers		Maths or Mathematical Literacy Geometry Sets	
	Every day	More often	Every day	More often	Every day	More often	Every day	More often
ASRH								
ASRL	✓		✓					

School	How often do you think the teachers use the available resources?							
	Maths or Mathematical Literacy Textbook		Maths or Mathematical Literacy Calculator		Maths or Mathematical Literacy Computers		Maths or Mathematical Literacy Geometry Sets	
	Every day	More often	Every day	More often	Every day	More often	Every day	More often
ASUO(L)	✓		✓					✓
BSUH	✓		✓					
BSUL	✓		✓		✓			✓
BSR(L)	✓			✓				
CSRL	✓							
CSRL		✓						
CSUO(H)		✓		✓				
DSUH	✓							
DSUL		✓		✓				
DSRO(H)	✓							

Table 31: Type of books and number of copies used in lessons observed (N=93)

LTSM type		No of lessons	No copies*
Language	Readers (Grade 2 only)	9	5, 3, 1
	Language textbooks (e.g. Clever, All-in-one, etc.)	3	0, 3, 0
	Poems or rhymes		
	Novels	1	0, 1, 0
	Drama		
	Short stories	4	0, 1, 3
	Dictionaries (e.g. learner's dictionary or published)		
	Teacher-made LTSM		
	Test books		
	DBE workbook	19	18, 1, 0
	Exercise books	29	29, 0, 0
	Worksheet (photocopies)		
	Computers (incl. tablets)		

Maths/Math Lit	Textbook	18	4, 9, 5
	DBE workbook (Grade 2)	11	10, 1, 0
	Loose worksheet		
	Exercise books	36	34, 2, 0
	Test books	1	0, 1, 0
	Manipulatives (e.g. counters) or instruments (rulers)		
	Calculators		
	Worksheets (photocopies)		
	Computers (incl. tablets)		

* 1st digit indicates number of classes seen in which learners each had a copy; 2nd digit – no. of classes sharing copies; 3rd digit – teacher copy only

Table 32: Use of books by school type

School type	Average no. of books used per class
Tot Primary	1.43
Tot Secondary	1.40
District A Prim	0.88
District B Prim	1.94
District C Prim	0.94
District D Prim	1.81
District A Sec	1.33
District B Sec	1.56
District C Sec	1.44
District D Sec	1.25
Primary High	1.38
Primary Low	1.26
Primary Outlier	1.24
Sec High	1.45

School type	Average no. of books used per class
Sec Low	1.50
Sec Outlier	1.25

Table 33: Basic school infrastructure and furniture

Type	Furniture not cared for					Buildings and grounds not cared for					Toilets not clean				
	Yes	Some	No	N/A	Tot	Yes	Some	No	N/A	Tot	Yes	Some	No	N/A	Tot
A	2	1	3	0	6	5	0	1	0	6	3	0	1	2	6
B	1	3	1	1	6	1	1	3	1	6	1	1	4	0	6
C	1	4	1	0	6	1	1	4	0	6	1	1	4	0	6
D	2	1	3	0	6	2	1	3	0	6	3	0	2	1	6
Prim	3	6	3	0	12	3	3	5	1	12	4	2	5	1	12
Sec	3	3	5	1	12	6	0	6	0	12	4	0	6	2	12
High	2	2	4	0	**8**	3	0	4	1	**8**	4	0	4	0	**8**
Low	1	3	3	1	**8**	2	2	4	0	**8**	1	1	5	1	**8**
Outlier	3	4	1	0	**8**	4	1	3	0	**8**	3	1	2	2	**8**
All	**6**	**9**	**8**	**1**	**24**	**9**	**3**	**11**	**1**	**24**	**8**	**2**	**11**	**3**	**24**

Table 34: Teachers views on monitoring learners' written work by HODs

SCHOOL	Learner work checked by HOD?	What do HODs look for when monitoring?						How often learners' written work is monitored, per term
		Writing regularly in workbook & exercise book	Teachers are marking learner work	Teachers give homework	Learners do corrections	Content of learner work is up-to-date, according to work plan	Content of learner work is at the correct grade assessment	
APRH	Yes**	✓						Once
APRL	Yes	✓				✓		Once
APUL	Yes		✓					More than once
ASRH	Yes*#	✓	✓			✓	✓	More than once

ASRL	Yes	✓	✓	✓		✓	✓	Once
ASUL	Yes*#	✓	✓		✓	✓	✓	Once
BPUH	Yes	✓				✓	✓	Once
BPUL	Yes	✓	✓		✓	✓		More than once
BPRH	Yes	✓	✓		✓	✓	✓	More than once
BSUH	Yes	✓	✓		✓	✓		Once/More than once
BSUL	Yes	✓	✓	✓	✓	✓	✓	More than once
BSRL	Yes^.		✓	✓	✓	✓	✓	Once/More than once
CPRH	Yes**	✓	✓		✓			Once
CPRL	Yes	✓	✓	✓				Once
CPUL	Yes	✓	✓			✓		Once
CSUH	Yes	✓				✓		Once/More than once
CSRL	Yes	✓	✓	✓	✓	✓		Less than once
CSRL	Yes*#		✓			✓		Once/More than once
DPUH	No							Never
DPUL	Yes	✓	✓					Once
DPRL	Yes	✓	✓		✓	✓		More than once
DSUH	Yes^#	✓		✓		✓	✓	Once
DSUL	Yes	✓	✓		✓	✓	✓	Once/More than once
DSRH	Yes	✓	✓			✓	✓	Once/More than once

Note:
** Not all HODs monitor learner work
* Work in EFAL not monitored
# Work in Mathematics not monitored
^ Work in Mathematical Literacy not monitored

Table 35: In-school CPD

School	Type of CPD					Led by…			How often per term
	SMT discusses with teachers their CPD needs	In-school CPD provided	Subject/grade-specific teacher meetings	One-on-one mentoring by HOD or other SMT	Other	Teachers	HOD/Subject Head	Principal/ Deputy Principal	
APRH	×	×							
APRL	✓	✓	✓			✓			Once
APUL	**	×							
ASRH	**	**	**				**		Once
ASRL	**	**	**		**	**			More than once
ASUL	**	×							
BPUH	✓	✓	✓		**		**	**	**(Once/More than once)
BPUL	**	×							
BPRH	×	×							
BSUH	**	**	**						Once
BSUL	**	×							
BSRL	×	×							
CPRH	**	×							
CPRL	×	×							
CPUL	✓	✓	**	**			**	**	Once
CSUH	✓	**	**					**	More than once
CSRL	✓	**			**			**	Once
CSRL	×	×							
DPUH	**	**	**			**			**(Less than once/Never)
DPUL	✓	✓	**		**		**	✓	More than once
DPRL	✓	×							
DSUH	×	×							

School	Type of CPD					Led by…			How often per term
	SMT discusses with teachers their CPD needs	In-school CPD provided	Subject/grade-specific teacher meetings	One-on-one mentoring by HOD or other SMT	Other	Teachers	HOD/Subject Head	Principal/ Deputy Principal	
DSUL	×	**	**			**	**		**(Less than once/More than once)
DSRH	**	**		**			**		More than once

Note: ✓ Yes
× No
** Provided for some teachers only

Table 36: Type of books and number of copies used in lessons observed (N=93)

LTSM type		No of lessons	No copies*
Language	Readers (Grade 2 only)	9	5, 3, 1
	Language textbooks (e.g. Clever, All-in-one, etc.)	3	0, 3, 0
	Poems or rhymes		
	Novels	1	0, 1, 0
	Drama		
	Short stories	4	0, 1, 3
	Dictionaries (e.g. learner's dictionary or published)		
	Teacher-made LTSM		
	Test books		
	DBE workbook	19	18, 1, 0
	Exercise books	29	29, 0, 0
	Worksheet (photocopies)		
	Computers (incl. tablets)		
Maths/Math Lit	Textbook	18	4, 9, 5
	DBE workbook (Grade 2 only)	11	10, 1, 0
	Loose worksheet		
	Exercise books	36	34, 2, 0
	Test books	1	0, 1, 0
	Manipulatives (e.g. counters) or instruments (rulers)		
	Calculators		

LTSM type		No of lessons	No copies*
	Worksheets (photocopies)		
	Computers (incl. tablets)		

* 1st digit indicates number of classes seen in which learners each had a copy; 2nd digit – no of classes sharing copies; 3rd digit – teacher copy only

Table 37: Use of books by school type

School type	Average no. of books used per class*
Tot Primary	1.43
Tot Secondary	1.40
District A Prim	0.88
District B Prim	1.94
District C Prim	0.94
District D Prim	1.81
District A Sec	1.33
District B Sec	1.56
District C Sec	1.44
District D Sec	1.25
Prim High	1.38
Prim Low	1.26
Prim Outlier	1.24
Sec High	1.45
Sec Low	1.50
Sec Outlier	1.25

* Where more than one book was used this was usually a textbook or DBE workbook and an exercise book

Table 38: Correlations between fieldworker judgement and pedagogical variables

Relationship	Correlation
Correl Judge vs Tot Ped, all schools	0.52
Correl Judge vs PCK, all schools	0.48
Correl Judge vs Q, all schools	0.37
vs Resp	0.09
vs Model	0.31
vs Prac	0.51
vs P&S	0.20
vs Diff	0.34
vs Time	0.39
vs Res	0.08
vs Behav	0.30
Correl Judge vs Tot Bks	0.19

Table 39: Learner writing in exercise books, and teacher test scores, Grade 10 maths

School		FET MATHEMATICS CONTENT AREAS						
		Functions	Number Patterns	Algebra	Euclidean Geometry	Analytical Geometry (T3)	Trigonometry	Other
ASRH	Teacher 1 Mean exercises*	3	1	17.5	0	8	6	0
	Teacher 1 Mean %	8.5	2.8	49.3	0.0	22.5	16.9	0.0
ASRL	Teacher 1 Mean exercises*	15	3	10.5	0	7	7.5	0.5
	Teacher 1 Mean %	34.5	6.9	24.1	0.0	16.1	17.2	1.1
	Teacher 2 Mean exercises*	9	2	12	0	9	6.5	2.5
	Teacher 2 Mean %	22.0	4.9	29.3	0.0	22.0	15.9	6.1
ASUL(O)	Teacher 1 Mean exercises*	10	3.5	8.5	0	3	3.5	0
	Teacher Mean %	35.1	12.3	29.8	0.0	10.5	12.3	0.0
District A Mean exercises		**12.6**	**3.1**	**17.1**	**0.0**	**9.8**	**8.4**	**1.1**
District A Mean %		**24.2**	**6.0**	**32.9**	**0.0**	**18.7**	**16.1**	**2.2**
BSUH (O)	Teacher Mean exercises	4.8	3.8	12.0	5.0	2.0	8.5	0.0
	Teacher Mean %	13.2	10.4	33.3	13.9	5.6	23.6	0.0

BSUL	Teacher Mean exercises	11.8	3.8	24.3	0.0	0.3	9.5	0.3
	Teacher Mean %	23.6	7.5	48.7	0.0	0.5	19.1	0.5
District B Mean exercises		**8.3**	**3.8**	**18.1**	**2.5**	**1.1**	**9.0**	**0.1**
District B Mean %		**19.2**	**8.7**	**42.3**	**5.8**	**2.6**	**21.0**	**0.3**
CSRL	Teacher Mean exercises	4.5	0.0	16.0	2.8	0.0	0.0	0.0
	Teacher Mean %	19.4	0.0	68.8	11.8	0.0	0.0	0.0
CSUH(O)	Teacher Mean exercises	15.8	0.0	10.8	1.5	0.0	1.5	0.0
	Teacher Mean %	53.4	0.0	36.4	5.1	0.0	5.1	0.0
District C Mean exercises		**10.7**	**0.0**	**15.4**	**2.5**	**0.0**	**0.8**	**0.0**
District C Mean %		**36.5**	**0.0**	**52.5**	**8.4**	**0.0**	**2.6**	**0.0**
DSUL	Teacher Mean exercises	17	3.8	18.8	0	5.3	9	0
	Teacher Mean %	31.5	7.1	34.9	0.0	9.8	16.7	0.0
District D Mean exercises		**17**	**3.8**	**18.8**	**0**	**5.3**	**9**	**0**
District D Mean %		**31.5**	**7.1**	**18.8**	**0.0**	**9.8**	**16.7**	**0.0**

Note: n/av Data not available
* Calculation based on two learners
% percent

Table 40: Learner writing in exercise books and teacher test scores, maths lit Grade 10

		FET MATHEMATICAL LITERACY CONTENT AREAS						
School		**Number Calculations**	**Patterns, relation-Ships etc.**	**Finance**	**Measurement**	**Maps, plans etc.**	**Data handling**	**Probability**
ASRL	Teacher Mean exercises	18.0	0.0	12.5	10.5	0.8	0.3	0.8
	Teacher mean %	42.1	0.0	29.2	24.6	1.8	0.6	1.8
ASUL	Teacher Mean exercises	9.0	0.3	5.5	6.8	0.0	0.5	0.5
	Teacher mean %	40.0	1.1	24.4	30.0	0.0	2.2	2.2
District A Mean exercises		**21.0**	**0.1**	**14.2**	**13.0**	**0.7**	**0.5**	**0.9**
District Mean %		**41.6**	**0.2**	**28.2**	**25.8**	**1.4**	**0.9**	**1.9**
BSUH (O)	Teacher Mean exercises	18.3	4.0	9.0	1.8	1.0	0.0	0.0
	Teacher mean %	53.7	11.8	26.5	5.1	2.9	0.0	0.0
BSUL	Teacher Mean exercises	11.5	2.0	6.0	12.0	3.0	0.0	3.5
	Teacher mean %	30.3	5.3	15.8	31.6	7.9	0.0	9.2
BSRL	Teacher Mean exercises	7.3	1.5	4.5	6.3	1.0	0.0	0.0
	Teacher mean %	35.4	7.3	22.0	30.5	4.9	0.0	0.0
District B Mean exercises		**23.9**	**4.9**	**12.3**	**10.6**	**2.9**	**0.0**	**2.0**
District Mean %		**42.2**	**8.7**	**21.8**	**18.8**	**5.1**	**0.0**	**3.5**
CSRL-1	Teacher Mean exercises	13.3	1.0	0.0	6.5	3.5	1.0	1.3
	Teacher mean %	50.0	3.8	0.0	24.5	13.2	3.8	4.7

CSRL-2	Teacher Mean exercises	11.8	4.8	3.5	5.8	1.0	0.0	1.3
	Teacher mean %	42.0	17.0	12.5	20.5	3.6	0.0	4.5
CSUH	Teacher Mean exercises	7.5	5.5	4.0	9.3	3.3	1.0	3.3
	Teacher mean %	22.2	16.3	11.9	27.4	9.6	3.0	9.6
District C Mean exercises		**20.6**	**6.0**	**3.8**	**11.9**	**4.4**	**1.1**	**2.9**
District Mean %		**40.7**	**11.8**	**7.6**	**23.6**	**8.6**	**2.1**	**5.7**
DSUL	Teacher Mean exercises	18.3	1.0	6.8	0.0	4.0	0.0	0.0
	Teacher mean %	60.8	3.3	22.5	0.0	13.3	0.0	0.0
DSRH	Teacher Mean exercises	14.3	0.0	4.0	13.8	2.5	0.0	3.0
	Teacher mean %	38.0	0.0	10.7	36.7	6.7	0.0	8.0
District D Mean exercises		**26.1**	**1.0**	**9.0**	**6.9**	**5.4**	**0.0**	**1.5**
District D Mean %		**52.3**	**2.1**	**18.1**	**13.8**	**10.8**	**0.0**	**3.0**

Table 41: Learner writing in exercise books and teacher test scores, Grade 10 EFAL

SCHOOL		Literature	Reading Compre-hension	Trans-actional writing	Language structures	Extended writing	Teacher test scores (%)
ASRH	Teacher Mean*	1.0	3.0	1.5	3.5	1.0	71
ASRL	Teacher Mean*	1.0	8.5	4.5	4.0	5.0	76
ASUL(O)	Teacher Mean*	1.0	2.0	2.5	2.0	2.5	71
District A Mean		**1.0**	**4.5**	**2.8**	**3.2**	**2.8**	**72.3**
BSUL	Teacher Mean	4.8	6.0	12.3	5.5	2.8	67
BSRL(O)	Teacher Mean	3.3	6.0	3.5	3.5	2.3	19
District B Mean**		**4.0**	**6.0**	**7.9**	**4.5**	**2.5**	**43.0**
CSRL-1	Teacher Mean	1.3	6.5	7.0	9.3	3.8	43
CSRL-2	Teacher Mean	1.0	8.3	4.8	4.0	2.8	48
CSUH(O)	Teacher Mean*	1.0	4.5	7.5	9.5	0.5	24
District C Mean		**1.1**	**6.8**	**6.2**	**7.2**	**2.7**	**38.3**
DSUH	Teacher Mean	6.8	7.0	4.8	6.5	2.0	81
DSUL	Teacher Mean	12.8	4.0	7.8	0.5	2.5	91
DSRH(O)	Teacher Mean*	3.5	1.0	2.0	4.0	2.0	71
District D Mean		**8.5**	**4.6**	**5.4**	**3.6**	**2.2**	**81.0**

Note: * Calculation based on two learners
** Calculation based on two schools

Table 42: Number of correct scores by item, maths test for Grade 2 teachers

ITEM	1a. Calculate 53.03 times 100? Ans: 5308	1b. Express 0.4 as a fraction in simplest form? Ans: 2/5	1c. Calculate 2495+760,7? Ans: 3255:7	1d. Calculate 5000-1093? Ans: 3907	2. What is the area of the whole object? Ans: 112	3a. How many sunny days? Ans:80	3b. which weather condition in 2008 appears on the least days?	3c. The rainy days are which fraction of the sunny days?	3d. Did they record the weather conditions for every day in 2008?	3e. Give a reason for your answer. Ans: Only 360 days were recorded	4. How many litres of orange juice can she make from 75 oranges?	5. What fraction of the grid is shaded? Ans: 12/30	6. 15-8+6 can be written as…. Ans: 1 and 3	7. Shade 2/3 of the blocks. Ans: 16 shaded blocks.	8. Which of these gives the best estimate of : 43*57 Ans: d)40*60	9. Determine the 7th term in the pattern? Ans: 26	10. How many girls are there in 8B? Ans: c) 18
No correct (max 22)	6	1	11	12	1	18	20	8	9	1	9	11	8	6	11	5	5

Table 43: Number of correct scores by item, English test, Grade 2 teachers

ITEM	1. This book is an autobiography because…	2. What is the main idea in P1?	3. In this sentence the word roughly means…	4. Why did Mandela feel proud of his new trousers?	5. Circle the fact	6a. Write a synonym for Comical.	6b. Write a synonym for Bestowed	7. Rewrite sentence in passive voice.	8. Choose the correct word.	9. Write a suitable heading or title for the extract.	10. Write a description of your parent or another family member
No correct (max 22)	7	5	12	10	21	7	8	10	13	19	Mean score: 4.4 (max 10)

Table 44: Number of correct scores by item, English test, Grade 10 teachers

ITEM	1. This book is an autobiography because…	2. What is the main idea in P1?	3. In this sentence the word roughly means…	4. Why did Mandela feel proud of his new trousers?	5. Circle the fact	6a. Write a synonym for Comical.	6b. Write a synonym for Bestowed	7. Rewrite sentence in passive voice.	8. Choose the correct word.	9. Write a suitable heading or title for the extract.	10. Write a description of your parent or another family member
No teachers	9	4	7	4	11	8	6	7	9	7	Mean score: 5.5 (max 10)

correct (max 11)											
Percent	82	36	64	36	100	73	55	64	82	64	55

Table 45: Grade 10 maths teacher scores on maths test by item

ITEM	1.1 How much did he pay in Rands per night	2.1 What distance did he travel on Monday?	2.2 Calculate the average cost of petrol over three days?	3.Which pair of fractions lies between:	4. Which of the following statements is correct?	5. Form a math equation.	6. Calculate x.	6.2 Which two of the following express incorrect thinking…?	7.1 What will the value of the investment be after 3 years?	7.2 How many years will the investment be?…	8. Calculate volume?	9. Draw a histogram	10. What is the chance of ……?
Total correct (max 13)	5	11	5	9	3	3	5	1	12	7	9	2	8

Table 46: Grade 10 maths literacy teacher scores on maths test by item

ITEM	1.1 How much did he pay in Rands per night	2.1 What distance did he travel on Monday?	2.2 Calculate the average cost of petrol over three days?	3.Which pair of fractions lies between:	4. Which of the following statements is correct?	5. Form a math equation.	6. Calculate x.	6.2 Which two of the following express incorrect thinking…?	7.1 What will the value of the investment be after 3 years?	7.2 How many years will the investment be?…	8. Calculate volume?	9. Draw a histogram	10. What is the chance of ……?
Total correct (max 13)	3	8	2	5	5	2	6	0	12	2	8	1	9

Table 47: Teacher access to curriculum documents

SCHOOL	Teachers intervd	CAPS Curriculum		National Policy on Programme and Promotion Requirements of NCS		National Protocol for Assessment	
		Number	Percent	Number	Percent	Number	Percent
APRH	1	1		1		1	
APRL	1	1		1		1	
APUL	2	2		2		2	
ASRH	3	3		0		1	
ASRL	3	2		2		2	
ASUL	3	3		0		0	
Total A	**13**	**12**	**92%**	**6**	**50%**	**7**	**58%**
BPUH	2	2		0		1	
BPUL	2	2		1		1	
BPRH	2	0		0		0	
BSUH	3	3		2		2	
BSUL	3	3		3		1	
BSRL	3	2		1		0	
Total B	**15**	**12**	**60%**	**7**	**58%**	**5**	**42%**
CPRH	2	2		1		0	
CPRL	2	1		1		0	
CPUL	2	2		2		2	
CSUH	3	3		1		1	
CSRL	3	3		1		1	
CSRL	3	2		0		1	
Total C	**15**	**13**	**87%**	**6**	**40%**	**5**	**33%**
DPUH	2	2		1		2	
DPUL	2	2		0		1	
DPRL	2	2		0		0	
DSUH	2	2		0		0	
DSUL	3	3		2		0	
DSRH	3	3		1		1	
Total D	**14**	**14**	**100%**	**4**	**29%**	**4**	**29%**
TOTAL	**57**	**51**	**89%**	**23**	**40%**	**21**	**37%**

Table 48: Training Deficits – Primary School SMTs (Principals & HODs)

School Performance	Number of principals and HODs interviewed who had not received CAPS inset for the following…										
	Principles of CAPS		Content knowledge		Methodology		Assessment		Analysis of assessment data		Management training*
	P	H	P	H	P	H	P	H	P	H	P
APRH											
APRL											
APUL	1						1		1	1	
BPUH#	1		1		1		1		1		1
BPUL	1		1								1
BPRH			1								1
CPRH						1		1		1	
CPRL	1	1		1				1		1	1
CPUL											1
DPUH				1							
DPUL											
DPRL									1		1
Total	**4**	**1**	**3**	**2**	**1**	**1**	**2**	**2**	**3**	**3**	**5**

Note: P=Principal; H=Head of Department
* Training for Principals only
# Principal did not receive any CAPS training at all

Table 49: Training Deficits – Secondary School SMTs (Principals & HODs)

School Performance	Number of principals and HODs interviewed who had not received CAPS inset for the following…										
	Principles of CAPS		Content knowledge		Methodology		Assessment		Analysis of assessment data		Management training*
	P	H	P	H	P	H	P	H	P	H	P
ASRH	1				1		1		1		1
ASRL	1										
ASUL		1								1	
BSUH		1								1	
BSUL		1	1		1						
BSRL											
CSRH	1				1	1		1		1	
CSUL	1	1		1				1		1	
CSRL	1										
DSUH		1				1			1	1	1
DSUL		1				1		1		1	
DSRH	1				1						1
Total	**6**	**6**	**1**	**1**	**4**	**3**	**1**	**3**	**2**	**6**	**2**

Note: P=Principal; H=Head of Department
* Training for Principals only

planning, monitoring and evaluation

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Recommendations and Management response for the Implementation Evaluation of the National Curriculum Statement Grade R to 12 Focusing on the Curriculum and Assessment Policy Statements (CAPS)

Recommendations from the Implementation Evaluation of the National Curriculum Statement Grade R to 12	Record of Agreement or Disagreement	Reasons for Disagreement
R1. DBE, DHET, SACE and Universities should devise curriculum and practice standards to guide the education and work of teachers.	Agreed	
R1.1 Implementation of Umalusi recommendations regarding CAPS It is recommended that DBE urgently consider the recommendations made by Umalusi regarding the maths and English (HL and EFAL) FET curricula. Following an evaluation of CAPS in 2014 it was recommended by Umalusi that this process be completed within 2 years.	Agreed	

Recommendations from the Implementation Evaluation of the National Curriculum Statement Grade R to 12	Record of Agreement or Disagreement	Reasons for Disagreement
R1.2 Raise the standard of EFAL in all phases Evidence indicates that raising the standard of EFAL - through the inclusion of higher cognitive functions in the NSC, other common assessment exercises, and LTSM in all four phases – would enable learners to strengthen performance across the curriculum. As such, this sub-recommendation should receive the highest priority.	Agreed. However, the inclusion of higher cognitive should not be exclusive to assessment exercises. All class work activities must include higher cognitive levels and be weighted accordingly: lower order 30%; middle order 40% and higher order 30%. The strengthening of CAPS should see to the inclusion of the difficulty levels in the policy document.	
R1.3 Review of CAPS assessment section The current review by DBE of Section 4 (Assessment) in the CAPS documents is supported. It is recommended that the following be included in the terms of reference for the review: • the number of formal tasks required by phase, and • clarifying the current confusion among teachers, HODs and SAs around levels of difficulty. A good way of dealing with this problem is by providing teachers with examples of items which exemplify different cognitive processes and	Agreed. Providing teacher with examples is insufficient: • Teacher need to be orientated/trained on weighting of tasks • Weighting of tasks should be standardised for all subjects and be contextualised per phase taking into account the incremental cognitive development levels of learners	

Recommendations from the Implementation Evaluation of the National Curriculum Statement Grade R to 12	Record of Agreement or Disagreement	Reasons for Disagreement
R1.4 Review of CAPS content It is recommended that DBE commission a review of the CAPS documents with a view to reducing content where appropriate. The priority should be on depth of understanding of the most important strands of the respective school subjects. DBE has identified this as a priority, and it is recommended that a wide range of experts be invited to participate in the review. This exercise should not result in major curriculum change. One way of addressing content overload, if it is found, is to label certain topics in CAPS as 'optional', or 'for further study', etc.	Disagree.	DBE needs to be cognisant about the risks of labelling certain topics in CAPS as 'optional', or 'for further study', etc. This can result in the topics not being taught at all..."teaching to the test syndrome" needs to be avoided.
R1.5 Distribution of NCS documents School level audits of NCS documents among teachers should be undertaken every three years, and supplies to schools topped up.	Agreed.	
R1.6 Review of national assessment for GET Regarding the redesign of a national assessment instrument for the GET Phase, it is recommended that DBE, in partnership with the provinces and in discussion with psychometricians and other assessment experts, drawn from both the public and private sectors: • Give careful consideration to the dangers inherent in implementing a poorly designed summative assessment system focusing on accountability (such as NCLB), taking account of the research; undertake a cost/benefit analysis before embarking on such an exercise. • Undertake a cost/benefit analysis before embarking on a systemic evaluation exercise. Particular consideration should be given to the marginal benefits of such a programme, over and above what is currently learned from SACMEQ, TIMSS, and PIRLS.	Agreed. The system needs to be well prepared and supported for implementation. A sound advocacy campaign must be developed and implemented throughout the system.	

Recommendations from the Implementation Evaluation of the National Curriculum Statement Grade R to 12	Record of Agreement or Disagreement	Reasons for Disagreement
• Pay particular attention to improving formative assessment at school and classroom levels. This is a central element of effective pedagogy, and formative assessment holds the key to linking the work of teacher educators, system-level officials, school leaders, and teachers. More detail on how to operationalise this recommendation is given in Sub-recommendations R1.7, R2.1, 3.1, and 5.1 – 5.4.		
R1.7 Teacher education and management DHET should continue to lead the PrimTEd programme, with strong support from DBE, while SACE should continue to lead the initiative designed to develop professional practice standards for teachers. It is recommended that DHET, CHE, EDF, DBE and SACE communicate with respect to their work regarding curriculum content standards for ITE, professional practice standards for teachers, standards for the accreditation of CPD programmes, and standards for the assessment of educators'.	Agreed	
R2. DBE, provinces and districts must review and apply merit-based policies and processes for the appointment and promotion of educators	Agreed.	
R2.1 Development of a merit-based promotion system it is recommended that DBE, in collaboration with provinces: • Gives priority to instituting a competence-based system for the appointment of principals within three years. The lessons learned in WC and GP should be built on. • Develops sets of standards for subject advisors and heads of	Agreed.	

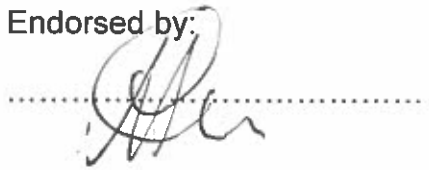
Recommendations from the Implementation Evaluation of the National Curriculum Statement Grade R to 12	Record of Agreement or Disagreement	Reasons for Disagreement
department, linked to the Standards for Principalship. • Pilots a merit-based approach to the appointment of school-level HODs and subject advisors.		
R2.2 Implementation – provinces Provincial officials should give particular attention to developing protocols for implementing the merit-based approach, in discussion with DBE.	Agreed.	
R2.3 Implementation – districts Circuit managers and subject advisors should support principals and monitor implementation of the promotions policy at school level, through direct observation and intervention where necessary.	Agreed. However, SGB's powers should be reduced in appointments of teachers, HODs and Principals.	
R3. DBE must work with universities, NGOs and corporate partners to conduct research on effective in-service education and training for teachers.	Agreed.	
R3.1 Promote a research-focused approach to CPD It is recommended that DBE and private sector donors allocate at least 5% of any training initiative to R&D. Areas requiring the most urgent attention are programmes which enable primary school teachers to teach literacy and basic maths, and to practice formative assessment in support of these disciplines.	Agreed.	
R3.2 Knowledge management	Partially agreed. The research component will be	

Recommendations from the Implementation Evaluation of the National Curriculum Statement Grade R to 12	Record of Agreement or Disagreement	Reasons for Disagreement
DBE should establish a Directorate for Knowledge Management, in the Research Coordination, Monitoring and Evaluation Chief Directorate. The task of the Dir: KM will be to collate research information on CPD and cumulatively build a knowledge base concerning the design and implementation of successful CPD programmes.	incorporated in the RCME responsibilities. A sub-directorate should be establish in the Directorate: THC for the research repository and quality insurance component.	
R4. DBE in collaboration with Provincial Departments of Education must develop an effective programme to achieve school functionality	Agreed.	
R4.1 Developing a plan DBE should work with provincial officials to develop an effective programme to achieve school functionality. Adequate resources, including transport to schools for district officials, must be allocated to the programme.	Agreed.	
R4.2 Implementation – provinces Each province should develop an implementation plan for achieving school functionality, which should include unannounced visits to schools by circuit managers. The statutory procedures governing the relationship between leaders and their subordinates are clear and even-handed in recognising both the responsibilities of managers and the rights of individuals. But in the end policy must be followed, even if it requires taking disciplinary measures against repeat offenders.	Agreed.	
R4.3 Implementation – districts	Agreed.	

Recommendations from the Implementation Evaluation of the National Curriculum Statement Grade R to 12	**Record of Agreement or Disagreement**	**Reasons for Disagreement**
It is recommended that circuit managers monitor implementation of time-use policy at school level, through direct observation. Principals and circuit managers who cannot maintain effective time management practices in the institutions under their jurisdiction must be rendered assistance, while repeated inability must lead to redeployment or dismissal, as prescribed by the law.		
R4.4 Implementation – schools School principals must ensure adherence of teachers to CAPS timetable. Recalcitrant teachers must be disciplined.	Agreed.	
R5. DBE and Provincial Departments of Education should develop an effective programme to support school leaders and teachers in curriculum implementation	Agreed.	
R5.1 Developing a plan DBE should work with provinces to incorporate best evidence of effective CPD programmes into the planning and rollout of support activities, with particular attention to literacy, basic maths and the use of formative assessment to promote learning in these foundation disciplines.	Agreed.	
R5.2 Implementation – provinces Provincial level curriculum leaders should work with subject advisors on the design, implementation and evaluation of such activities.	Agreed.	
R5.3 Implementation – districts Subject advisors should work with school-level HODs, meeting regularly at a rotating central venue, on running in-school PLCs to focus on matters of curriculum, assessment and pedagogy. Particular attention should be	Agreed. However, a full evaluation should be conducted to establish who is best situated to support teachers, HOD's or Subject	

Recommendations from the Implementation Evaluation of the National Curriculum Statement Grade R to 12	**Record of Agreement or Disagreement**	**Reasons for Disagreement**
given to using assessment data to identify learner misconceptions and pedagogical effectiveness in literacy and basic maths.	Advisors. The correct structures should be put in place based on the findings of the research.	
R5.4 Implementation – schools Principals should coordinate and direct the team of HODs within the school to promote engagement by teachers with curriculum issues. The promotion and quality assurance of PLCs in the relevant phase/subject areas should be central to the principal's role in exercising instructional leadership, as envisaged in the Standard for Principalship.	Agreed.	
5.4.1 It is recommended that HODs: Work with teachers in in-school PLCs to focus on formative assessment and effective pedagogy, in this way strengthening teachers' understanding of and skill in applying PCK in class, constructing test papers, and analysing the results. Part of this exercise must be to shift the focus of monitoring from inputs to outcomes, for example, using the Early Grade Reading Assessment (EGRA, and the Early Grade Maths Assessment (EGMA) tools to test directly the literacy and numeracy skills of learners.	Agreed	

Endorsed by:



Mr H.M Mweli

Director-General: Department of Basic Education

Date: 07/07/2017

DEPARTMENT: PLANNING, MONITORING AND EVALUATION

DEPARTMENT: BASIC EDUCATION

Improvement Plan for the Implementation Evaluation of the National Curriculum Statement Grade R to 12: focusing on the Curriculum and Assessment Policy Statements (CAPS)

Title of Evaluation	Implementation Evaluation of the National Curriculum Statement Grade R to 12: focusing on the Curriculum and Assessment Policy Statements (CAPS)	**Date of Approval of Evaluation Report**	31 May 2017
Name of Lead Department	Department of Basic Education	**Date of Approval of Improvement Plan**	
Contact Person	Mr HM Mweli	**Position**	Director-General
Telephone/ Cell No		**Email**	tom.n@dbe.gov.za

Date of Report		
Reporting Cycle (Mark with an X)	**January - June**	**July- December**

Improvement Objective 1	**The curriculum and practice standards are refined to incorporate findings from the CAPS Evaluation**

Outputs to achieve the objective	**Priority L/M/H**	**Activity to achieve output**	**By who? (Institution/ Person responsible)**	**Target/ Indicator**	**By when? (Deadline)**	**Embedded where**
1.1. **Umalusi Maths, EFAL, EHL FET NSC/CAPS recommendations implemented**	H	1.1.1. Organise a stakeholders workshop on Umalusi recommendations.[1]	**DBE Branch C** **Director: M, S &T (Ms Kembo)** **Director: CCS (Ms Weston)** **Director: CCC (Ms Carvello)**	Signed decision matrix on each recommendation. A task team is established.	September 2017	OP of Branch C
		1.1.2. Organise consultative meeting/workshop with provinces.	**DBE Branch C** **Director: M, S &T (Ms Kembo)** **Director: CCS (Ms Weston)** **Director: CCC (Ms Carvello)**	Signed decision matrix on each recommendation. A champion for the implementation of the management plan should be identified from each province.	November 2017	OP of Branch C
		1.1.3. Develop a management plan with milestones. Part of the management plan should consider teacher training.	**DBE Branch C** **Director: M, S &T (Ms Kembo)** **Director: CCS (Ms Weston)** **Director: CCC**	DG approved curriculum revision and implementation plan.	January 2018	OP of Brach C All PEDs to adopt

[1] The engagements should capture all pacing issues, as well as the ordering of topics. The engagements should also focus on all phases, including ECD.

			(Ms Carvello)			
1.2. EFAL standard is raised	**H**	1.2.1. Engage with stakeholders on recommendations as part of the engagement in recommendation 1.1.[2]	**DBE Branch C** **Director: CCS (Ms Weston)** **Director: CCC (Ms Carvello)**	Signed decision matrix on each recommendation. A champion for the implementation of the revisions should be identified from each province.	September 2017 – January 2018	OP of Branch C
		1.2.2. Revise DBE Workbooks, focusing specifically on higher cognitive demand.[3]	**DBE Branch C** **Director: CQE (Mr Subban)**	DG approved workbook revision plan.	January 2018	OP of Branch C
		1.2.3. Revise textbooks focusing specifically on higher cognitive demand.[4]	**DBE Branch C** **Director: CQE (Mr Subban)**	DG approved workbook revision plan.	January 2018	OP of Branch C
1.3. CAPS Assessment Document and Content are reviewed	**H**	1.3.1. Conclude the current review of Section 4 in the CAPS documents.	**DBE Branch P, DBE Branch C, DBE Branch T.** **Director: PNN (Mr Chetty)** **Director: THC (Mr Mahomed)** **Director: CCS (Ms Weston)** **Director: CCC**	DG Approved report on the review, with clear recommendation and next steps.	November 2017	OP of Branch P

[2] Engagements should focus on the inclusion of higher cognitive levels in all class work activities and should be weighted accordingly: Lower order 30%; middle order 40% and higher order 30%.
[3] DBE Workbooks are reviewed annually prior to being rolled out, these revisions should form part of that process. These revisions should also be included in the teacher guide.
[4] The DBE national textbook catalogue is reviewed annually prior to being rolled out, these revisions should form part of that process. These revisions should also be included in the teacher guide.

			(Ms Carvello)			
		1.3.2. Organise a stakeholder's workshop on the revised final assessment documents.	**DBE Branch P** **Chief Director: PN (Dr Poliah)**	Signed decision matrix on each recommendation. A task team is established including external assessment experts.	February 2018	OP of Branch P
		1.3.3. Organise a consultative meeting/workshop with provinces.	**DBE Branch P** **Chief Director: PN (Dr Poliah)**	Signed decision matrix on each recommendation. A champion for the implementation of the assessment reforms should be identified from each province.	March 2018	OP of Branch P
		1.3.4. Develop an implementation plan with milestones.[5]	**DBE Branch P** **Chief Director: PN (Dr Poliah)** **Director: THC (Mr Mahomed)**	DG Approved Implementation Plan.	April 2018	OP of Branch P
		1.3.5. Develop a policy which provides a clear and consistent description of different assessment strategies across phases and subjects.	**DBE Branch P** **Chief Director: PN (Dr Poliah)**	Published and gazetted policy.	April 2019	OP of Branch P

[5] The implementation plan should include teacher training on formative assessment. Providing teachers with examples is insufficient. Teachers need to be orientated/ trained on weighting of tasks. The weighting of tasks should be standardised for all subjects and be contextualised per phase taking into account the incremental cognitive development levels of learners.

1.4. CAPS content is reviewed	**H**	1.4.1. Review the CAPS documents with a view of reducing the content where appropriate.[6]	**DBE Branch C**	DG Approved Report on the Review.	November 2018	OP of Branch C
		1.4.2. Approval of the Review Documents.	**DG: DBE**	DG Approved Report on the Review.	December 2019	OP of Branch C
		1.4.3. Engage with stakeholders on the reviewed CAPS documents.	**DBE Branch C**	Signed decision matrix.	February 2019	OP of Branch C
		1.4.4. Organise a consultative meeting/ workshop with provinces.	**DBE Branch C**	Signed decision matrix.	March 2019	OP of Branch C
		1.4.5. Develop an implementation plan with milestones.	**DBE Branch C**	DG Approved Implementation Plan.	April 2019	OP of Branch C
		1.4.6. Implement the implementation plan over a 3 year period.	**DBE Branch C**	Quarterly progress reports.		OP of Branch C
1.5. NCS documents are available in all classrooms in all schools	**H**	1.5.1. NSC documents should be part of the compulsory documents to confirm by subject advisors.	**DBE Branch C** **(Subject Advisors)**	Verification of improvement through SMS every three years.	June 2018	OP of Branch C
1.6. National Assessment for GET is reviewed	**H**	1.6.1. Conclude the current review of the National Assessment for GET.[7]	**DBE Branch P** **Chief Director: PN (Dr Poliah)**	A publicly available report on the review, with clear recommendation and next steps.	November 2017	OP of Branch P
		1.6.2. Development of an Implementation Plan for the Gr 9 school leaving certificate.	**DBE Branch P**	DG Approved Implementation Plan.	June 2018	OP of Branch P
		1.6.3. Approval of the Review documents.	**DG: DBE**	DG Approved Review Documents.	July 2018	OP of Branch P
		1.6.4. Engage with stakeholders on the reviewed National Assessment System.	**DBE Branch P** **Chief Director: PN (Dr Poliah)**	Signed decision matrix on each recommendation.	February 2018	OP of Branch P

[6] DBE needs to be cognisant about the risks of labelling certain topics in CAPS as 'optional', or 'for further study', etc. This can result in the topics not being taught at all…"teaching to the test syndrome" needs to be avoided.

[7] Dialogue has been ongoing on a national level with all stakeholders and substantial progress has been made. The review should include (1) a cost/benefit analysis of both the suggested summative assessment system, and (2) the proposed systemic evaluation system.

		1.6.5. Organise a consultative meeting/workshop with provinces.	**DBE Branch P** **Chief Director: PN (Dr Poliah)**	Signed decision matrix on each recommendation. A champion for the implementation of the National Assessment System should be identified from each province.	March 2018	OP of Branch P
		1.6.6. Develop an assessment implementation plan with milestones.	**DBE Branch P** **Chief Director: PN (Dr Poliah)**	DG approved implementation plan.	April 2018	OP of Branch P
1.7. Professional standards for teachers, HODs, Circuit Managers and Subject Advisors are developed. A CPD programme and an assessment system of educators are developed.	**H**	1.7.1. Synthesise all previous reviews and policies on teacher, HOD, Circuit Manager and Subject Advisor professional standards.	**DBE Branch T** **Director: TCT (Mr Mabaso)**	Approved publically available report.	July 2018	OP of Branch T
		1.7.2. Engage with stakeholders on implementation of professional standards. DHET, CHE, EDF, DBE, ETDP SETA and SACE should partake in these engagements. These engagements should result in a working committee that will be responsible for overseeing the setting of these standards.	**DBE Branch T** **DHET** **SACE** **Chief Director: TE (Ms Geyer)** **Chief Director: TH (Mr Rabotapi)** **DHET: (Mr W Green)**	Signed decision matrix on each recommendation. DG approved Implementation Plan. A champion for the implementation of the National Standards should be identified from each organisation and province.	October 2017	OP of Branch T
		1.7.3. Develop the National Professional Standards for Teachers, HODs, Circuit Managers and Subject Advisors. Development of National Standards for the accreditation of CPD.	**DBE Branch T** **DHET** **SACE**	National standards.	July 2019	OP of Branch T

		programmes. Development of National Standards for the assessment of teachers.[8]	**Chief Director: TE (Ms Geyer) Chief Director: TH (Mr Rabotapi)** **DHET: (Mr W Green)**			
		1.7.4. Approval of the standards.	**DG: DBE**	DG Approved National standards.	August 2019	OP of Branch T
		1.7.5. Develop a sound advocacy campaign of the implementation of the professional standards.	**DBE Branch T** **Chief Director: TE (Ms Geyer) Chief Director: TH (Mr Rabotapi)**	Approved advocacy plan.	March 2019	OP of Branch T

[8] The professional standards should clearly stipulate the requirements and responsibilities for each position, as well as clearly defined lines of accountability and the necessary corrective measures when required.

Improvement Objective 2	**A merit-based appointment and promotion policy for educators, school-level HODs, principals and subject advisors is reviewed and implemented. This policy will stipulate a clear set of standards for all promotion posts and explicit protocols will guide implementation.**

Outputs to achieve the objective	Priority L/M/H	Activity to achieve output	By who? (Institution responsible)	Indicator/ Target	By when? (Deadline)	Embedded where
2.1. A merit-based promotion system, including a set of standards for Principals, Deputy Principals, HODs, subject advisors, circuit managers and HODs, is developed. [9]	**H**	2.1.1. Review the Provincial merit-based promotion policy documents, processes and implementation, with the purpose of building on the lessons learnt in implementing such a system.	**DBE Branch T** **Chief Director: TE (Ms Geyer)** **Chief Director: TH (Mr Rabotapi)**	A publically available proposed competency framework based on the evidence collected.	February 2018	OP of Branch T
		2.1.2. Commission an independent skills audit of all Subject Advisors. Principals, Deputy-Principals and HODs through independent service providers.	**DBE Branch T**	AG approved skills audit.	June 2019	OP of Branch T
		2.1.3. Develop an implementation plan and provincial protocols based on the National Standards as established through Recommendation 1.6.	**DBE Branch T** **Chief Director: TE (Ms Geyer)** **Chief Director: TH (Mr Rabotapi)**	Approved implementation plan and provincial protocols.	March 2018	OP of Branch T

[9] This has already been captured in the Basic Education MTSF. The significance and national importance has been agreed upon in the MTSF.

		2.1.4. Engage with unions, SACE, ELRC and provinces on the implementation of a merit-based promotion system.	**Branch T** **Chief Director: TE (Ms Geyer)** **Chief Director: TH (Mr Rabotapi)**	Signed decision matrix on each recommendation. Stakeholder adoption of approved implementation plan and protocols. A champion for the implementation of the Merit-based Promotion System should be identified from each organisation and province.	April 2018	OP of Branch T
		2.1.5. Approval of the system and standards.	**DG: DBE**	Approved system and standards.	Ongoing from February 2019.	OP of Branch T
		2.1.6. Development of a sound advocacy plan for the implementation of the system.	**DBE Branch T** **Chief Director: TE (Ms Geyer)** **Chief Director: TH (Mr Rabotapi)**	Approved advocacy plan.	Ongoing from February 2019	OP of Branch T
2.2. A merit-based Promotion System is	**H**	2.2.1. Train circuit managers, subject advisors, SGBs and principals on the implementation of the protocols for promotion.	**DBE Branch T and PEDs**	Proportion of circuit managers, subject advisors, SGBs and Principals trained.	Ongoing from February 2019	OP of Branch T

implemented in Provinces		2.2.2. Implement the merit-based approach commence in provinces based on the National Standards as established through Recommendation 1.6.	**DBE Branch T and PEDs**	Proportion of all circuit managers, subject advisors, SGBs and Principals that were appointed through the new approach.	Ongoing from February 2019	OP of Branch T
2.3. A merit-based Promotion System is implemented in Districts		2.3.1. Develop a district level PERSAL module to confirm competency testing.[10]	**DBE Branch T and Branch D**	Functional PERSAL module as signed off by the DG.	Ongoing from February 2019	OP of Branch D
		2.3.2. Train HR District officials on the quarterly competency upload process.	**Branch T and Branch D**	Proportion of new competency scores.	Ongoing from February 2019	OP of Branch D

[10] The module must ensure that permanent appointment only occurs once competence testing was conducted and passed

Improvement Objective 3	**The evaluation of an in-service education and training system for teachers becomes mandatory and research findings are used to inform CPD programmes.**

Outputs to achieve the objective	**Priority L/M/H**	**Activity to achieve output**	**By who? (Institution responsible)**	**Indicator/ Target**	**By when? (Deadline)**	**Embedded where**
3.1. A research-focused approach to Continuous Professional Development (CPD) is developed	**H**	3.1.1. Develop and sign an agreement with support from National Treasury to earmark 5% of any teacher training initiative to R&D.	**Branch R CFO** **Director: RCME** **(Dr Taylor)**	Signed agreement. Establishment of a funding mechanism with clear criteria for access.	June 2019	OP of RCME
		3.1.2. Commission an CPD Implementation Evaluation through the National Evaluation Framework.[11]	**NICPD Branch R: Director: RCME (Dr Taylor)**	Approved Final Report, Approved Management Response, Approved Improvement Plan.	June 2018 Service Provider appointment. Study to be concluded within12 months after appointment.	OP of RCME
		3.1.3. Set a research agenda and developing a system which continuously collate and updates research.	**NICPD Branch T Branch R**	Approved research agenda. Functional system that contains the	October 2019	OP of Branch T

[11] The evaluation should also include a benchmarking exercise.

			Director: TCT (Mr Mabaso) **Director: RCME** **(Dr Taylor)**	latest research on Teacher Training.		
3.2. A knowledge management system is established.	**M**	3.2.1. A system that ensures that information on CPD programmes is continuously collated and evaluated using quality insurance criteria.	**NICPD** **Branch T** **Director: TCT (Mr Mabaso)**	Quarterly reports to provinces and districts on CPD programmes which are proven to be successful.	Ongoing from February 2019	OP of Branch T

Improvement Objective 4	**An effective programme to achieve school functionality is designed and implemented.**

Outputs to achieve the objective	Priority L/M/H	Activity to achieve output	By who? (Institution responsible)	Indicator/ Target	By when? (Deadline)	Embedded where
4.1. An effective programme to achieve school functionality is implemented.	H	4.1.1. Conduct a scoping study on current programmes which aims to achieve school functionality in the weakest performing 20% of schools as identified through Provincial Common Assessments.[12]	**DBE Branch R** **Director: RCME** **(Dr Taylor)**	Publically available report with recommendations of two potential programmes that should be piloted.	September 2018	OP of Branch D
		4.1.2. Pilot school functionality programmes based on best practices identified through the scoping study.[13]	**DBE Branch D and Branch R** **Director: RCME** **(Dr Taylor)**	Pilot and Evaluation Reports that clearly identifies the strengths and weaknesses in the pilot, as well as recommend the most efficient system for implementation.	Ongoing from February 2019	OP of Branch R
		4.1.3. Engage with stakeholders regarding the lessons learnt in the review.	**DBE Branch D**	Signed decision matrix on each recommendation. A champion for the implementation of the School	Ongoing from February 2019	OP of Branch D

[12] The aim of this study will be to establish 2 potential programmes that can be piloted for implementation. Consultative workshops and engagements with the Free State, Gauteng and Western Cape provinces should be included to consider the lessons learned in these provinces regarding the implementation of School Improvement Plans.

[13] The pilot should focus on the weakest performing 20% of schools as identified through the Provincial Common Assessments.

				Functionality Programme should be identified from each organisation and province.		
		4.1.4. Develop a set of protocols for provinces to develop effective programmes to achieve school functionality in particularly the weakest performing 20% of schools as identified through the Provincial Common Assessments.[14]	**DBE Branch D**	Approved protocols for developing protocols for programme development.	Ongoing from February 2019	OP of Branch D
4.2. A programme on School Functionality is Implemented in Provinces	**H**	4.2.1. Each province develops an effective programme to achieve school functionality, following the national protocols.[15]	**DBE Branch D and PEDs**	Approved programme.	September 2019	OP of Branch D
		4.2.2. Engage with stakeholders within provinces on the implementation of the programme to achieve school functionality.	**DBE Branch D and PEDs**	Signed decision matrix on each recommendation. A champion for the implementation of the School Functionality Programme should be identified from each organisation and province.	Ongoing from February 2019	OP of Branch D
		4.2.3. Develop a management plan and monitoring guidelines for districts for the implementation of the programme to achieve school functionality.	**DBE Branch D and PEDs**	Approved Management Plan.	Ongoing from February 2019	OP of Branch D

[14] These protocols should include a resource planning system which will provide the PED with live information on each schools' status to achieving functionality. This should be considered as part of current systems such as SA-SAMS and Lurits systems. These protocols should establish the 9 pillars of schools functionality of the Whole School Evaluation as the standardized set of indicators against which to measure school functionality.

[15] Whole school evaluation and IQMS efforts should be considered and strengthened in the development of these programmes.

		4.2.4. Train districts, circuit managers and subject advisors on the implementation of the programme to achieve school functionality.	**DBE Branch D and PEDs**	Proportion of district officials, circuit managers and subject advisors trained.	Ongoing from February 2019	OP of Branch D
4.3. A programme on School Functionality is implemented in Districts		4.3.1. Train SGB's, HOD's and School Principals on the programme to achieve school functionality.	**DBE Branch T** **Director: THM**	Proportion of SGB's, HOD's and School Principals trained.	Ongoing from February 2019	OP of Branch D
		4.3.2. Monitor the implementation of the programme to achieve school functionality.	**DBE Branch T** **Director: THM**	Proportion of schools classified as function.	Ongoing from February 2019	OP of Branch D
4.4. A programme on School Functionality is implemented in Districts		4.4.1. Train HOD's and Teachers on the requirements to achieve school functionality.	**Branch T** **Director: THM**	Proportion of HODs and Teachers trained.	Ongoing from February 2019	OP of Branch D

Improvement Objective 5	**The DBE and Provincial Departments of Education should develop an effective programme to support school leaders and teachers in curriculum implementation.**

Outputs to achieve the objective	Priority L/M/H	Activity to achieve output	By who? (Institution responsible)	Target/ Indicator	By when? (Deadline)	Embedded where
5.1. An effective programme to support curriculum implementation is developed	**H**	5.1.1. Review current best practices that are being investigated through the NECT, EGRS, PILO. The review should specifically consider which models work best under which circumstances.[16]	**DPME**	Publically available report with clear recommendation.	September 2019	OP of DPME
		5.1.2. Approve report on current best practice	**DG: DBE**	Approved Report.	October 2019	OP of Branch C
		5.1.3. Strengthen requirements for SMT Curriculum Implementation support and develop protocols for best practice.[17]	**DBE Branch T** **Chief Director: TE**	Formal minimum requirements for Curriculum support.	November 2019	OP of Branch C
		5.1.4. Develop a district level PERSAL module to confirm competency testing for Principals, Deputy- Principals and HODs. The competency assessment should be based on the National Standards as established through Recommendation 1.6.[18]	**DBE Branch T and Branch D**	Functional PERSAL module signed off by the DG.	Ongoing from February 2019	OP of Branch D
		5.1.5. Conduct consultative workshops and engagements with universities, unions and SACE on establishing protocols for effective support for curriculum implementation	**DBE Branch C**	Signed decision matrix on each recommendation.	October 2018	OP of Branch C

[16] Various programmes are currently investigating effective models of providing curriculum implementation support and this research needs to inform best practice for curriculum support.

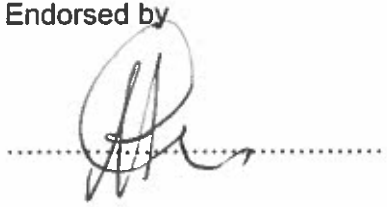
[17] This should include the consideration of the current models of HOD competency assessment which are being conducted in Provinces. The schooling system is designed for HODs to give subject specific support to teachers. Currently there are not enough Subject Advisors to play this role. The current competencies and capabilities of HODs, as well as their current teaching load, are not conducive to them supporting teachers effectively. Measures of accountability needs to be established in this process.

[18] The module must ensure that permanent appointment only occurs once competence testing was conducted and passed. National Standards must apply for competency test.

		5.1.6. Develop of a set of standardized indicators and benchmarks measure and classify effective curriculum implementation support. These indicators should include, amongst others, indicators on curriculum coverage and learner performance.[19]	**DBE Branch C**	Approved Standradised indicators.	November 2018	OP of Branch C
		5.1.7. Approval of Standardised Indicators	**DBE Branch C**	Approved Standardised Indicators.	December 2018	OP of Branch C
5.2. A programme to support curriculum is implemented in provinces	**H**	5.2.1. Train districts, circuit managers and subject advisors on the implementation of the programme to support curriculum implementation.	**DBE Branch C and Provinces**	Proportion of district officials, circuit managers and subject advisors trained.	Ongoing from February 2019	OP of Branch C
		5.2.2. Implement a set of indicators that were developed through Recommendation 5.1.[20]	**DBE** **Branch C and Provinces**	Quarterly Reports.	March 2019	OP of Branch C
5.3. A programme to support curriculum is implemented in districts	**H**	5.3.1. Train SGB's, HOD's and School Principals on the programme of curriculum implementation support.	**Provinces and Districts**	Proportion of SGB's, HOD's and School Principals trained.	Ongoing from February 2019	OP of Branch C
		5.3.2. Monitor the implementation of the programme to support curriculum implementation. The implementation should incorporate strong lines of accountability.	**Provinces and Districts**	Quarterly Reports.	Ongoing from February 2019	OP of Branch C
5.4. A programme to support curriculum is implemented in schools	**H**	5.4.1. HOD's to implement effective curriculum support. The implementation should incorporate strong lines of accountability.	**Provinces and Districts**	Quarterly Reports.	Ongoing from February 2019	OP of Branch C

[19] Current efforts to track curriculum implementation should be considered.
[20] Measures of accountability needs to be established.

Endorsed by



Mr H.M Mweli
Director-General: Department of Basic Education

Date: 05/07/2017