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Schools in the Time of
COVID-19: Impacts of the
Pandemic on Curriculum

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Schools in the time of COVID-19: impacts of the pandemic on curriculum

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Abstract

This working paper presents the findings of research into the impact of the COVID-19 pandemic on the curriculum in South Africa. Four research questions frame the report: how much time was lost for teaching, learning and assessing because of COVID-19?; what are the implications of lost time for learning losses?; what was the curriculum policy response to COVID-19?; and what is to be done about curriculum recovery and lost learning? Drawing on an analysis of policy, key informant discussions and a survey of international literature, the report argues that the time lost was very variable across schools, though substantial in most. This has led to learning losses that are vast but impossible to accurately measure. Although the curriculum policy response was coherent and mostly clear too many decisions around what to teach and assess were increasingly devolved to the school and teacher level. One of the key challenges facing curriculum recovery in 2021 will be the high levels of variability in coverage carried over from 2020 in schools and high levels of heterogeneity in classrooms. While the inclination may be thus to continue to devolve decisions around coverage and assessment to the teacher, the report cautions against this, recommending a differentiated approach in response, consideration of accelerated learning and additive remote strategies, and efforts to shore up as much instructional time in 2020 and 2021 as possible.

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1 Introduction

On 23 March 2020 South Africa entered a period of lockdown in response to the COVID-19 global pandemic and all schools were closed. The initial three week period was eventually extended to 15 September 2020, with different 'levels' of lockdown regulating the kinds of restrictions placed on people's movement and activity. For 10 weeks, up until 8 June 2020, no children were permitted to go to school. From the outset deep inequalities in the schooling system were felt. While a small proportion of schools rapidly switched to online learning, educational activity came to a complete halt for the majority of learners.

One of the key difficulties in curriculum planning from the perspective of schools, the national Department of Basic Education (DBE), as well as the provincial education departments (PEDs), was the constant changes in decisions regarding the reopening of schools after the initial three weeks. Throughout these processes of decision-making, five teacher unions, including the largest ones - the South African Democratic Teachers Union, the National Teachers Union and the National Teachers' Organisation of South Africa - consistently contested reopening, arguing that schools did not have systems in place to ensure the safety of teachers and learners. Gradually some of the governing body associations added their voices to that of the unions, as well as some prominent academics. Counter to these arguments, a number of academics, researchers, paediatricians and epidemiologists argued for the re-opening of schools based on a scientific assessment of risk, and also on the basis of an estimation of the relative risks to children of staying out of school (primarily related to children's safety, access to nutrition and learning).

After several delays, schools officially reopened on 8 June, with a planned staggered return of grades. These plans were revised a number of times. On 24 July, with five grades having returned (three for less than a month), schools were closed again in response to an upsurge in COVID-19 cases and deaths, and in response to pressure from the teacher unions. Inequalities again were starkly evident in these processes of opening and closing. Children in poorer communities were most disadvantaged by the closing of schools, especially in terms of the access to safety, nutrition and learning provided at school. By and large, schools in affluent communities continued with online learning or well-supported learning at home, or were more likely to apply for the early return of more grades to school. The process of opening and closing thus affected schools along socio-economic lines. The unequal and unpredictable schooling environment made curriculum planning very challenging.

1.1 Research questions

The aim of this working paper is to consider the impact of COVID-19 on the curriculum, teaching and learning and assessment. It is guided by four questions:

- a) How much time was lost for teaching, learning and assessing because of COVID-19?
- b) What are the implications of lost time for learning losses?
- c) What was the curriculum policy response to COVID-19?
- d) What is to be done to support curriculum recovery and learning gains?

The paper argues that it is not possible to provide definite answers to the first two questions because the shocks caused by the pandemic were felt very differently across the schooling system. An analysis of how many school days were lost, and the loss of instructional time, suggests that learning loss has been considerable. An analysis of policy shows that over time decisions around what to teach and assess were increasingly devolved to the school and teacher level. In addressing the fourth question, a set of curriculum principles, questions and recommendations suggest a way forward. One of the key challenges facing curriculum recovery in 2021 will be the high levels of variability in curriculum coverage carried over from 2020 across schools. The other will be the high levels of heterogeneity in classrooms within schools. While the inclination may thus be to continue to devolve decisions around

coverage and assessment to the teacher, the report cautions against this, recommending a differentiated approach in response, consideration of accelerated learning and additive remote strategies, and efforts to shore up as much instructional time in 2020 and 2021 as possible.

1.2 Methodology

The central approach taken in the report is a review of the available evidence around the impact of COVID-19 on issues of curriculum, teaching, learning and assessment. Official curriculum policy produced by the national Department of Basic Education (DBE) in this period is key data. I also review the substantial international literature that has been produced in the course of the pandemic. Finally, the report draws on a series of key informant discussions I had with principals, teachers and bureaucrats. The schools where the teachers and principals were located I have labelled the Schools School A through School F. They are located in the Western Cape, Gauteng and Eastern Cape. The schools are drawn from across the quintiles and include an independent school. The data extracts are not intended to be representative but rather illustrative of particular issues raised in the report.

2. How much time was lost for teaching, learning and assessing because of COVID-19?

Table 1: Number of school days available for instruction in 2020

Grade (in order of staggered return to school)	Term 1 school days available (pre-COVID-19 2020 calendar)	Term 2 school days available (COVID-19 calendar up to 24 July)	Term 3 school days available 2020 (COVID-19 calendar up to 23 October)	Term 4 school days available 2020 (COVID-19 calendar up to 15 December)	Total school days available in 2020 (COVID-19 calendar)	% of school days of pre-COVID-19 2020 calendar (=204 days)
Grade 12	48	35	58	0	141	100%*
Grade 7	48	35	53	32	168	82%
Grades R,1,2,3,6,10,11	48	15	44	32	139	68%
Grades 4,9	48	0	44	32	124	61%
Grades 5,8	48	0	39	32	119	58%

*calculated on the basis of number of days for Grade 12s as per 2019 calendar (138)

2.1 School days lost

Table 1 indicates how many school¹ days and the proportion of the pre-COVID-19 school calendar were available for instruction in 2020. The calculations assume that schooling proceeds as normal up until 15 December 2020 (with a five day break in October) with no further school closures. Because of a staggered re-opening for different grades, there is a significant range in the number of official school days, with Grades 5 and 8 and Grades 4 and 9 suffering the greatest proportion of days lost from the pre-COVID-19 calendar (42% and 39% respectively). Grade 7 and Grade 12 lost the least number of school days, given their prioritisation in reopening as primary and secondary school exit level grades. The table also shows that, in terms of absolute number of days retained, the range is from 118 days to 168 days. Officially, Grade 12 had more school days available than they would in a normal year, as a result of their early return to school and the delay of the National Senior Certificate (NSC or 'matric') examination. The early grades lost a full third of the school year.

¹ The report only refers to ordinary public schools and not special education needs schools or focus schools, although both of these were explicitly addressed in all policy.

2.2 Additional time losses

A number of additional factors impacted on how many instructional days children in different schools had available to them. In addition to the factors mentioned below, the period under lockdown was one of considerable **social instability** with widespread social delivery protests. These, and the sudden economic insecurity, widespread hunger and psychological hardships faced by families would also impact on the functioning of schools, their staff, students and broader communities.

The most significant source of additional time loss came from the **timetabling models** that the vast majority of schools were forced to adopt in order to meet legislated social distancing requirements². Direction 10 of the DBE Directions states that every school must comply with the social distancing requirement of 1,5m. It also stipulates that all schools must operate at 50% or less of their capacity at any one time. Masks need to be worn by everyone at school and all present need to abide by stipulated hand washing / sanitizing protocols. Gustaffson (2020) shows that South Africa has one of the most stringent sets of rules regarding social distancing in schools globally, combining a 1.5m distance requirement (the WHO recommends 1m); masks; and operation at 50% capacity. Gustaffson's (2020) estimates indicate that learners would lose a lot less contact time if just the 1.5m rule was shifted to 1m. The regulations make allowance for schools with facilities large enough to comply with distancing requirements to apply for exemption and follow the normal school timetable. Findings from the National Income Dynamics Study – Coronavirus Rapid Mobile Survey (NIDS-CRAM) study show that for grades already "open", attendance rates did not differ across socioeconomic groups, but for grades "not yet open", attendance was significantly higher in the top 10% of households³.

Based on the social distancing requirements, schools had the choice of five timetable models: daily and weekly rotation (learners coming on alternate days or weeks); bi-weekly rotation (learners coming for two weeks at a time then remaining at home); platooning or shifts (half the school attending a morning shift and the other half an afternoon shift; traditional or daily (normal, daily attendance); or a hybrid of different models.

While information is patchy, the vast majority of schools selected a rotational system that would have (at least) halved the amount of onsite instructional time for learners. The National School Readiness (NSR) Survey (2020)⁴ of 7162 schools indicated that 57% of schools had opted for daily or weekly rotation, 15% biweekly rotation and 5% platooning. 8% of schools were following a regular timetable and 4% had adopted a hybrid model. This meant that 72% of schools were losing 50% or more of their contact instructional time. Where learner:classroom ratios were very high, students would have been split into three, attending school only once every three days or one week in three⁵. Other factors also came into play regarding timetabling options, exemplified in Schools B and F below.

Timetabling models

School E is a quintile 3 primary school, located in a poor, peri-urban area. It charges school fees of R4500 per annum. Because of a lack of payment of school fees, the school lost two of its School Governing Body teaching posts, thus creating a staff shortage. In addition, the school has hired out its hall for Grade 12 teaching and exams, and so it is no longer available as it was earlier in the year as a teaching venue. Because of the shortage of space and teachers, the school has opted for a rotational model where Grades 4 attends school on Monday, Grade 5 on Tuesday, Grade 6 on Wednesday, Grade 7 on Thursday and then the four grades take turns coming on Friday. This means that for the third term, each grade will be on-site at school for between seven and eight

² Directions issued by the DBE in terms of Regulation 4(3) of the Regulations published in terms of section 27(2) the Disaster Management Act, 2002, as amended ("DBE Directions", May 2020) and *Guidelines for Development of the School Timetables reopening of schools COVID-19* ('Timetabling Guidelines', May 2020)

³ Mohohlwane et al, 2020, p7.

⁴ National School Readiness Survey (2020). Survey 5, 11 August.

⁵ Van der Berg and Spaul (2020)

days in total. The school could accommodate one additional grade per day, but teachers claim they are exhausted and nervous about having more learners on campus.

School F is an inner city quintile 4 school that has adopted a weekly rotation. They have been able to bring back all their Grade 11s and Grade 12s, utilising the school hall, staff room and other venues as additional instructional spaces. The grades 8, 9 and 10 are all in classes of 40 learners and half of the grades attends every second week. Grade 12s are also attending on Saturdays. Teachers set work for learners at home, although most learners do not complete the work.

Additional time losses likely to contribute to differences between and within schools were also incurred through **school closures due to infection**⁶, **teacher shortages** due to comorbidity concessions and **poor learner attendance**. A national DBE survey of 611 schools (excluding the Western Cape) between the 1st and the 10th of July showed that the largest number of schools fell into the absence range of between 10% and 25%. The normal average absentee rate is 2%⁷.

An additional contributor to time loss is likely to be the **cessation of instruction for 2020**. According to all discussants for this project, as well as media reports, teaching and learning is likely to end early in 2020 either to provide space for the writing of the NSC at the school or to conduct the usual end of year administration. Dates provided by respondents varied from 23 October, to 2 November, 16 November and the end of November. A Gauteng principal indicated,

“On 23 October teaching and learning will end. All grades from grade 8 to 12 will receive their timetables. Grades 8 to 11 will write exams from 2 November to the end of November. Learners will be issued with reports on 11 December”⁸.

According to this principal, schools were told to manage their end of year procedures according to their different circumstances. The implications of this is that learners will lose an addition month to month and a half to examinations or premature end of year school closure.

In summary, school days allocated on the official calendar do not translate into instructional days or contact time. Most of the additional instructional time lost during the COVID-19 period would be attributable to the timetabling models that schools were compelled to adopt. This additional loss could have been anything up to an additional 40 days lost in the case of adhering to the 50% rule, to 60 days in the case of overcrowding. The more crowded a school, the less space and the less resourced, the more days likely lost.

Inequalities in instructional time loss

Three cases of the Grade 5 level are provided below, drawn from discussions with school personnel. They indicate the huge variation in the amount of instructional time learners obtained.

School A, Private school Fees: R123 000 per annum

School A closed on 14 March, a week before the official announcement of public school closures. The Grade 5s took all their books and textbooks home. In the week 16 to 20 March the school went online, this period regarded as a dry run, getting learners accustomed to the technology. An extended holiday followed from 20 March to 14 April. On 14 April online schooling commenced, with a full-day, five day week. Teaching and learning were predominantly synchronous, using video live feed via MicroSoft Teams. This continued through May and the Grade 5s returned to on-campus schooling on 9 June. The school had a two week holiday from 14 to 30 June. Schooling then continued everyday for the full school day on campus from 1 July until 18 September with a three day mid-term break.

⁶ Hlati, O. (2020)

⁷ Mohohlwane et al, 2020, p12.

⁸ Principal interview, 13 September.

School B, Quintile 3 school Fees: R4500

School B closed on 18 March. In the few days prior to lockdown less than half the Grade 5 learners (those who were still attending school) were given DBE workbooks to take home. They would not go to school again until almost five months later. In late April, the school was able to open for school feeding and about 80% of Grade 5 parents were given a second learning pack, again consisting of DBE workbooks as well as learner exercise books. Some of the Grade 5 teachers sent WhatsApp messages to parents, usually consisting of a photo of a worksheet to be completed and instructions regarding pages to complete in the DBE workbooks. The uptake was variable, although the difference between those learners able to work at home and those who didn't was reported to be evident in assessments when they returned to school on 31 August. The Grade 5s attended school once a week, on Tuesdays, and once a month on Fridays. By the time of their assessments in October they had received seven face-to-face lessons in key subjects. For other subjects they had been instructed to study on their own.

School D, Quintile 3 school: no fee

School D closed on 18 March. Most of the children were given DBE workbooks and some worksheets to take home with them prior to closing. When Grade 7 returned to school on 8 June, a second pack was distributed to Grade 5 parents who came to collect, consisting of the second DBE workbook for the year. There was no other communication between the school and the homes of learners in the nearly five months between closing and the return of the Grade 5s on 31 August. Since August, Grade 5s (like the rest of the school) attend every second day of the week and alternate Fridays. The whole school is divided into two groups that alternate in this way.

3. What are the implications of lost time for learning losses?

3.1 Estimating learning losses: international perspectives

A number of international studies have tried to predict the educational recovery efforts that will be necessary to address the learning losses due to COVID-19 by extrapolating from prior studies of school closures⁹. Many of these studies use 'summer slide' data of learning losses of children over the long summer holidays in the United States (US) to try and predict losses, producing estimates of losses of around 30% in reading and more than 50% in mathematics¹⁰. Studies conducted in developing country contexts show similar learning losses resulting from school closures due to normal grade transitions (holidays) and in the context of natural disasters¹¹.

Sabates et al (2020)¹² draw on a dataset of a population of disadvantaged and previously out of school students transitioning from a complementary basic education programme into government schooling in Ghana. They link disparities in learning loss resulting from the transition period to a number of key factors currently considered key to supporting on-going learning during school closures: children's motivation to learn and study hard; their support to study at home; their access to educational materials in the home; and the availability of television, radio and mobile phones. Predictably, this research confirms that "grade transition" loss does occur in lower income countries and can be severe.

A study of the Pakistani earthquake of 2005 indicated that although in many respects recovery from the disaster was remarkable (schools were rebuilt quickly and dropout rates were low) at every age, children who lived closer to the fault line were doing worse at school than those who lived farther away. Those close to the fault line who missed three months of school were the learning equivalent of 1.5 years behind where they would have been with no earthquake four years after the earthquake. Amongst the more disadvantaged of the population, there was a difference between those with mothers who had more education and those with less. A difference of 0.67 grade-levels in test scores

⁹ Quinn et al (2016); Harris & Larsen (2019); Gottfried and Kirskey (2017)

¹⁰ Soland et al (2020)

¹¹ Slade et al (2017); Akyeampong et al. (2018)

¹² Sabates et al (2020)

between the children of educated/non-educated mothers among villages far from the fault line increased further to 1.8 grade-levels for children living close to the fault line. In their analysis, Das et al (2020)¹³ argue that learning losses persisted even after children returned to school and that children learnt less in each year after re-enrolling in school. They attribute this to a mismatch between curriculum expectations and learners' actual learning levels.

Three issues emerge from the broad range of prior studies into learning loss. The first is that learning losses can be severe, but are different across grades, subjects and socio-economic background of learners. Second, it is not clear from the research whether forgetting learned material occurs non-linearly, with rapid initial deceleration of knowledge followed by slower drop offs as time passes or if losses accelerate the longer learners are outside school. This ignorance could lead to under and overestimations of the impacts of school closures¹⁴. Third, one of the most consequential aspects of learning losses is that of heterogeneity. Learning losses are uneven and produce greater achievement differences between students within the same grade. This affects teachers' ability to meet the instructional needs of all students. As studies of the 2005 Pakistani earthquake study show, this heterogeneity can be considerable even amongst the most disadvantaged¹⁵. The only empirical study of learning losses due to COVID-19 to date (from Belgium) shows considerable between and within school differences in learning losses, both along socio-economic lines¹⁶. A recent study in Germany shows the difference in remote learning amongst advantaged learners, with low ability learners spending more time than high-ability students engaged in 'passive' activities (TV, computer games, and mobile phones as opposed to school-based activities¹⁷.

3.2 Estimating learning losses: South Africa

Because the South African COVID curriculum response relied so heavily on continued learning in the home, children's losses in learning will in part be related to their caregivers' education and literacy levels, ability to provide support and work obligations. In addition, the availability of education resources in the home (books, materials and computers) will create disparities that map on to existing social and educational inequalities. All of this, plus a consideration of the nutrition, health and psychological effects of the virus on learners will need to be taken into account before getting to estimations of learning and loss. Simulations by Gustaffson and Nuga (2020) assume that actual days lost need to be inflated by 25% to produce a learning-adjusted measure of time lost. Thus 40 days of school closures would result in the loss of 50 days' worth of learning. Estimations of learning loss, however, rest on knowledge of how many days were in fact lost, whether loss over time is linear, and how different groups were affected differently, especially in relation to opportunities for remote learning and educational support in the home. We don't have reliable data on any of these factors.

What we do know is that losses occurred, and evidence suggests that they are substantial and likely to vary considerably between *and* within schools. To rub salt in the wound, after a year of very disrupted schooling it is becoming increasingly clear that learning and teaching are likely to cease before 15 December. A conservative estimate, allowing schools their routine time for end of year promotion, progression, reports and transfer administration, is that the end date would be 30 November 2020. Schools are due to commence in 2021 on 25 January 2020. That means that students will once again be out of school for an extended period (almost two months), likely to compound learning losses already incurred in 2021.

¹³ Das et al (2020)

¹⁴ Kuhfield et al (2020)

¹⁵ Das et al (2020)

¹⁶ Maldonado & De Witte (2020)

¹⁷ Woessmann et al., 2020

4. What has the policy response been thus far?

From May 2020 onwards, a raft of policies was produced to address curriculum recovery. There were four central curriculum strategies undertaken by the DBE to address the issue of learning losses caused by school closures:

- a) Reduction in curriculum content
- b) Suspension / rationalising of subjects
- c) Changes to assessment
- d) Remote learning

Overall the general policy direction was clear from the start and it was coherent (see Appendix A for key curriculum-related policy documents). Over time, as more days were lost due to further school closures and timetabling models, curriculum decisions were devolved to the school and teacher, and assessment and quality assurance requirements across the levels of schooling were relaxed. By September 2020 it was clear that a large portion of the academic content for 2020 was not going to be covered in the majority of schools. Table 2 provides a summary of some of the key documents relevant to curriculum that were produced between May and August 2020.

Table 2: Summary table of key policy documents with curriculum entailments developed in response to COVID-19

Document	Released	Curriculum relevance / purpose
Directions issued by the DBE in terms of Regulation 4(3) of the Regulations published in terms of section 27(2) the Disaster Management Act, 2002, as amended	29 May 2020	Postponement of June SC and NSC examination Social distancing regulations Timetabling models
Guidelines for development of the school timetables reopening of schools COVID-19	May 2020	Details on timetabling models
Circular No S2 Of 2020 Release of the revised Annual Teaching Plans (ATPs) for Grade 7 and Grade 12 respectively	23 May 2020	Releases the revised (trimmed) ATPs for Grade 7 and 12 Cancellation of June examinations
School Recovery Plan in Response to COVID-19	June 2020	Guidance on: (a) the recovery of lost time, (b) management of the curriculum, (c) teaching and learning and (d) school-based assessment and examinations.
Annexure A Fundamental Content and Skills Revised Annual Teaching Plans (ATPs) General Education and Training (GET)	5 JULY 2020	Outlines specific fundamental content/topics/concepts that should be covered per subject, per phase and grade in the context of the revised school calendar (GET)
Annexure B Fundamental Content and Skills Revised Annual Teaching Plans (ATPs) Further Education and Training (FET)	5 July 2020	Outlines specific fundamental content/topics/concepts that should be covered per subject, per phase and grade in the context of the revised school calendar (FET)
Teacher Guidelines for Implementing Revised Annual Teaching Plans (ATPs) TEACHER VERSION('Teacher Guidelines')	6 July 2020	Guidelines for decision-making in selecting content to teach
National Assessment Circular 02 Of 2020 Implementation And Quality Assurance of the Amended 2020 Assessment Programme in the General Education and Training (GET) Band (Grades R-9)	9 July 2020	Principles and procedures for administration, moderation and quality assurance of assessment (GET) Formative assessment, SBA and formal assessments SA-SAMMs recording

Circular S3 of 2020 Distribution of the Teacher Guidelines for the implementation of Annual Teaching Plans (ATPs) and the Minimum Core Content and Skills per subject and per grade	9 July 2020	Release of the documents regarding core concepts, content and skills per grade and per subject Allowance for a reduction in the subjects offered at the different grade levels
Circular E11 Implementation and quality assurance of 2020 School Based Assessment: Grades 10-12	13 July 2020	Details regarding assessment at the Grade 10 to Grade 12 levels. Issues of administration, moderation and quality assurance of school-based assessment
Circular S7 Revised promotion requirements for Grade 10 and 11 for the 2020 year	12 September 2020	Promotion requirements for Grades 10 and 11 for 2020

4.1 Reduction in curriculum content

4.1.1 'Curriculum Trimming' in the Revised Annual Teaching Plans (ATPs)

In preparation for the re-opening of schools after the initial lockdown period, the DBE undertook a process of trimming the ATPs¹⁸. The Revised ATPs were introduced via 'Circular S2'¹⁹ providing the purpose and principles of curriculum trimming and reorganisation. These addressed issues of curriculum progression, coherence and sensitivity to the particular school context, the guiding principles articulated as:

- Feasibility – analyse and examine the content in the light of the time and resources available to the schools, considering the current socio-economic and political climate.
- Coherence – systematic curriculum mapping must have horizontal, vertical, subject area and interdisciplinary coherence.

The Grade 12 curriculum would not be trimmed, but rather reorganised with a reduction in school-based assessments. Initially trimming was seen as temporary measure for 2020 with a return to the normal curriculum planned for 2021.

The Revised ATPs were completed prior to repeated delays in school reopening and a second closure in July. They were not revised again. A rapid analysis conducted of Foundation Phase subjects, Creative Arts Senior Phase, Life Sciences FET, Dramatic Arts FET, English Home Language FET and Mathematical Literacy FET show that in general the changes were sensible and in line with the principles stated above, but they were not substantial. In many cases changes constituted more a reorganisation (especially the shift of Term 2 content to later in the year) and a reduction in assessment and opportunities for practice rather than an actual trimming²⁰.

4.1.2 The 'Fundamentals'

Once schools reopened in June it became increasingly evident to the DBE that there would be considerable further loss of teaching time, particularly in the context of the delayed and staggered reopening, the rotational timetabling models and much higher teacher and learner absenteeism than normal. A second process of curriculum content reduction was thus undertaken, with some significant shifts in approach. This time "the minimum concepts, content and skills per grade and per subject"

¹⁸ Annual plans developed by the DBE and PDEs that set out a schema with dates and notional hours for the teaching of the Curriculum and Assessment Policy Statement (CAPS), the national curriculum

¹⁹ DBE (2020) Circular No S2. Release of the Revised Annual Teaching Plans (ATPs) for Grade 7 and Grade 12 respectively. 23 May

²⁰ Rapid analyses conducted by Sandan (2020); Palte (2020); Senekal (2020); Burrige (2020); Boyd (2020); Phetlu (2020); and Loizides (2020).

were identified for each subject and grade – called ‘Fundamentals’. Three sets of documents and addenda were released through ‘Circular 3’²¹: These were:

- a) Teacher Guidelines for Implementing the Revised Annual Teaching Plans (ATPs).
- b) The Minimum Core Content and Skills per subject and grade as addenda to the Revised Annual Teaching Plans (ATPs) (or ‘Fundamentals’)
- c) PowerPoint presentations to mediate the guidelines and core content for GET and FET.

Significantly, the documents provided for greater flexibility around curriculum coverage, with decisions around what to teach being devolved to individual teachers: “in selecting what content to leave out and to reorganise, teachers will employ their own professional judgement on which content is crucial for their learners to do this year, and at what depth.”²² Curriculum trimming now becomes school-based, and variations in coverage across schools is anticipated: “the minimum concepts, content and skills that are core per grade and per subject, that are to be taught, learned, assessed and prioritised when teachers conduct school-based trimming and reorganization”²³ and the Circular acknowledges that “the challenges will differ from one context to the other and ways of addressing these challenges in the time remaining in 2020 will be context-specific”²⁴.

There was also a strong emphasis on collaboration, as teachers were expected to inform their trimming decisions in collaboration with colleagues from the preceding and following grades. Further expectations are outlined in the Teacher Guidelines, that include teachers: designing and using diagnostic assessment to inform curriculum selection; collaboratively planning on-going selections based on formative assessment; balancing face-to-face, remote and self-guided learning; and conducting continuous communication between teachers around coverage²⁵.

Assistance with identifying core content was also provided for teachers in the Annexure A and Annexure B²⁶ documents and via the associated online PowerPoint slide presentations for each grade and each subject²⁷. The main mechanism for reducing curriculum coverage demands in the Fundamentals process was to identify broad, priority topics without detailed content specifications, and to delink topics from specific time frames for completion (as presented in the ATPs). In other words selection and pacing requirements were relaxed.

The documents did not always clearly indicate what had been removed making some of them difficult to navigate. Figures 1 to 4 below show the ATP and the Fundamentals document for Mathematics and Natural Science for Grade 6, indicating how the content was represented. In the Natural Science example no content is removed just specified in less detail, and in the Mathematics example percentages, measurement and data handling are removed (although their removal is not indicated in the fundamentals).

²¹ DBE (2020) Circular S3. The Distribution of the Teacher Guidelines for the implementation of Annual Teaching Plans (ATPs) and the Minimum Core Content and Skills per subject and per grade. July 2020

²² DBE (2020) Circular S3. The Distribution of the Teacher Guidelines for the implementation of Annual Teaching Plans (ATPs) and the Minimum Core Content and Skills per subject and per grade. July 2020

²³ Ibid. paragraph 6

²⁴ Ibid. paragraph 4.

²⁵ (DBE) 2020. Teacher Guidelines for Implementing the Revised Annual Teaching Plans (ATPs) (‘Teacher Guidelines’)

²⁶ Annexure A Fundamental Content and Skills Revised Annual Teaching Plans (ATPs) General Education and Training (GET). Annexure A Fundamental Content and Skills Revised Annual Teaching Plans (ATPs) General Education and Training (FET).

²⁷ <https://www.education.gov.za/Home/RecoveryPlan2020.aspx>

Figure 1: Revised ATP document extract Grade 6 Mathematics

MATHEMATICS 2020 WEEKLY TEACHING PLAN GRADE 6 TERM 3							
TERM 3	Week 1 & 2	Week 2 & 3	Week 3 & 4	Week 4	Week 5	Week 5-7	3 days of week 7
Time Allocation	10 hrs.	5 hrs.	5 hrs.	5 hrs.	5 hrs.	9 hrs.	Assignment
Topic, concepts, skills and values	DECIMAL FRACTIONS Recognising, ordering and place value of decimal fractions <ul style="list-style-type: none"> Count forwards and backwards in decimal fractions to at least two decimal places Compare and order decimal fractions to at least two decimal places Place value of digits to at least two decimal places Calculations with decimal fractions <ul style="list-style-type: none"> Addition and subtraction of decimal fractions with 	PERCENTAGES Percentages <ul style="list-style-type: none"> Find percentages of whole numbers Equivalent forms: <ul style="list-style-type: none"> Recognize equivalence between common fraction, decimal fraction and percentage forms of the same number 	CAPACITY AND VOLUME Practical Measuring <ul style="list-style-type: none"> Estimate and practically measure 3-D objects using measuring instruments such as: <ul style="list-style-type: none"> measuring spoons measuring cups measuring jugs Record, compare and order capacity and volume of 3D objects in millilitres (ml), litres (l) and kilolitres (kl) Calculations and problem-solving	MASS Practical measuring <ul style="list-style-type: none"> Estimate and practically measure 3-D objects using measuring instruments such as: <ul style="list-style-type: none"> balloon scales (analogue and digital) kitchen scales (analogue and digital) balances Record compare and order mass of objects in grams (g) and kilograms (kg) Calculations and problem-solving	LENGTH Practical measuring <ul style="list-style-type: none"> Estimate and practically measure 2-D shapes and 3-D objects using measuring instruments such as: <ul style="list-style-type: none"> rulers metre sticks tape measures trundle wheels Record, compare and order lengths of shapes and objects in millimetres (mm), centimetres (cm), metres (m), kilometres (km) Calculations and problem-solving	DATA HANDLING Collecting and organising data <ul style="list-style-type: none"> Collect data using: <ul style="list-style-type: none"> tally marks and tables for recording using simple questionnaires (yes/no type response) Order data from smallest group to largest group N.B Provide learners with data to save time Representing data <ul style="list-style-type: none"> Draw a variety of graphs to display and interpret data including: <ul style="list-style-type: none"> pictographs (many-to-one correspondence) bar graphs and double 	Decimal Fractions, Percentages, Capacity and Volume, Mass and Length

Figure 2: Fundamentals document extract Grade 6 Mathematics

3.2 MATHEMATICS GRADE 4-6

Fundamentals to be Prioritised	Mathematics Grade 4-6: Proposed Topics/Concepts per Priority
Numbers, Operations and Relationships	Counting, ordering, representing and place value Performing all operations with whole numbers Common Fractions Decimal fractions (Grade 6 only)
Patterns, Functions and Algebra (Grade 6 Only)	Number sentence Numeric and Numeric Patterns
Space and Shape (Grade 5 and 6 Only)	Properties of 3D objects
Measurement	Area, Perimeter and Volume

Figure 3: Revised ATP document extract Grade 6 General Science

Matter and Materials

TERM 2 29 days	Week 13	Week 14	Week 15	Week 16	Week 17	Week 18
CAPS Topics	<ul style="list-style-type: none"> Orientation Revision of Work completed in Term 1 	<ul style="list-style-type: none"> Solids, Liquids and gases (½ week) 	<ul style="list-style-type: none"> Mixtures (1 week) 	<ul style="list-style-type: none"> Solutions as special mixtures (2½ weeks) 		
Topic, concepts, skills and values		<ul style="list-style-type: none"> Arrangement of particles 	<ul style="list-style-type: none"> Mixtures of materials 	<ul style="list-style-type: none"> Solutions Soluble substances Saturated Solutions Insoluble substances 		Assessment

Matter and Materials and Energy and Change

TERM 3 37 days	Week 19	Week 20	Week 21	Week 22	Week 23	Week 24	Week 25	Week 26	Week 27
CAPS Topics	<ul style="list-style-type: none"> Dissolving (1 week) 	<ul style="list-style-type: none"> Mixtures and water resources (2½ weeks) 		<ul style="list-style-type: none"> Processes to purify water (2½ weeks) 			<ul style="list-style-type: none"> Electric circuits (2½ weeks) 		
Topic, concepts, skills and values	<ul style="list-style-type: none"> Rates of dissolving 	<ul style="list-style-type: none"> Water pollution Importance of wetlands 		<ul style="list-style-type: none"> Clean water 			<ul style="list-style-type: none"> A Simple circuits Circuit diagram 		

Figure 4: Fundamentals document extract Grade 6 General Science

3.4 NATURAL SCIENCES AND TECHNOLOGY GRADE 4-6

Fundamentals to be Prioritised	Natural Sciences & Technology: Proposed Topics/Concepts per Priority
Matter and Materials	Grade 4 <ul style="list-style-type: none"> Materials around us (Solids, liquids and gases; Change of state; The Water Cycle)
	Grade 5 <ul style="list-style-type: none"> Uses of metals (Uses of metals; Other properties of metals)
	Grade 6 <ul style="list-style-type: none"> Solids, liquids and gases (Arrangements of particles) Mixtures (Mixtures of materials) Solution as a special mixture (Solutions; Soluble substances; Insoluble substances) Dissolving (Rates of dissolving)

Circular S3, which introduced the Fundamentals in early July recognised that the curriculum wasn't going to be completed, and devolved planning for 2020/2021 to 'school-based efforts': "to utilise available resources, time and space to develop a plan for critical content, skills, values and attitudes for the 2020 academic year with a view to using part of the 2021 academic year to revise and remediate 2020 work (para 1)". The policy radically devolves decision-making to the school level, introducing a great deal of flexibility. The teacher is required to function as an autonomous, highly skilled individual, able to exercise just-in-time professional judgements regarding content selection, in-person and remote pedagogies and appropriate assessments. These are very unrealistic expectations for the average South Africa teacher, particularly in the context of a very unstable schooling system buckling under the strains of a pandemic. In addition, high levels of subject and pedagogical expertise would be needed to meet these requirements.

4.2 Rationalising of subjects

Across the policy there was ambivalence regarding the teaching of all subjects in the curriculum. Initially no subjects were to be removed from the curriculum, apart from Life Skills being integrated into the Home Language curriculum at Foundation Phase. The Timetabling Guidelines suggested that schools keep core subjects "such as Mathematics, Home Language, English First Additional Language (EFAL), in the timetable daily", while alternating subjects such as Life Skills or Life Orientation, but the Revised ATPs asserted:

all subjects are important, as they form part of the learning programme in a given phase. The schools should adhere to the revised Annual Teaching Plans (ATPs) of all the subjects and ensure that no subjects are done away with, or their time gets allocated to subjects that are deemed important by the school²⁸ (p.24).

With the increasing flexibility described above, Circular S3 introduced the possibility of reducing the subjects that were covered in the Senior Phase (from nine to seven subjects). Languages, Mathematics, Natural Science and Life Orientation were to remain compulsory, however, schools could drop two of four subjects from their timetable: Economic and Management Sciences, Technology, Social Sciences or Creative Arts.

4.2.1 Differentiating subjects

Although not made explicit, the conceptual logic of the DBE decision around what subjects to rationalise is partially clear. Drawing on Muller (2006) it is possible to categorise school subjects in terms of their content, concept or skill emphasis, which has implications for progression. **Concept-rich** subjects build verticality, where concepts learnt in earlier grades provide the conceptual basis on which to continue learning. Mathematics and science fall into this category. Without a solid early understanding of the number system in mathematics, for example, later learning of algebra and geometry (indeed all mathematical topics) is not possible. The content-concept link is important and sequence is very important.

Content-rich subjects also build vertically, but the content-concept link is not as strong. Contents may be repeatable and substitutable in developing the broad concepts of the subject. For example, World War One or the end of apartheid could equally be used to teach the big historical ideas of cause and effect or historical perspective, and they could be taught at different levels, repeatedly and in a different sequence for the same purpose. Subjects like Languages and Social Sciences fall into this category.

Skill-rich subjects build horizontally, and their content is generally a collection of topic segments that can be covered in any order and often at any level. They are also often repeated. So for example, in

²⁸ Timetabling Guidelines, p.24.

Life Skills or Life Orientation, personal safety may be repeated at different levels and does not depend on other content having been taught previously. Sequence is thus not important. In addition in skill-rich subjects, context is paramount to the selection of content, as skills have a contextual referent and imply application.

From the above it is clear that there are differences between subjects in terms of the strength of the concept-content link and the importance of sequencing to progression. Although the decision behind making these subjects optional may have been pragmatic on the part of the DBE, it nonetheless distinguishes between concept-rich, content-rich and skill-rich subjects. Making subjects that are more skills-based, like Technology, Economic and Management Sciences (EMS) and Creative Arts optional, makes logical sense especially in relation to the implications for progression. These choices potentially have equity implications, where the suspension of some subjects may result in a poorer overall education experience for learners. But the tension is one that needs to be managed in times of crisis and dire shortage of curriculum time, ensuring that when a normal timetable is resumed students' potential to progress in key subjects is not jeopardized.

4.3 Reducing and changing assessment

The biggest curriculum policy changes were made in the area of assessment. These changes were issued through a number of gazettes and circulars over a protracted period (May to October 2020). The first changes shifted the June 2020 Senior Certificate and National Senior Certificate ('Matric')²⁹ examinations to November / December 2020³⁰. June examinations were cancelled for all grades³¹ and an emphasis placed on **formative assessment**, especially in school-based assessment (SBA). At the GET level, in the Foundation Phase there were to be no formal assessment tasks, and no assessment mark was to be recorded for Life Skills. The number of assessments was decreased across Grades 4 to 9.

Circular 02 stipulated that a school-based test would replace the end-of-year examination in all subjects in the GET. The school-based test would carry a reduced weighting and time allocation, and "not all content and aspects of a subject are included with priority given to those aspects considered core for progression into the next grade" (para 7.3). An example of the assessment requirements was provided in relation to mathematics, shown in Figure 2 below. The SBA component of the final mark in all grades was thus increased (from 75% in Grades 4 to 6 and 40% in Grades 7 to 9 to 80% across the grades).

Figure 5: example of GET assessment requirements for mathematics

	Subject	Term 1	Term 2	Term 3	Term 4
Grade 7	Mathematics	Tasks 1–2 completed	No formal assessment	One summative assessment task	School-based formal test
	Weighting	80%			20%

Circular 02 also suggested an easing of the moderation processes, devolving these to the school level. The document explained the procedures for using SA-SAMS in cases where assessments could not be administered. Adjustments to the system included a built-in functionality to address cases where an

²⁹ Directions issued by the DBE in terms of Regulation 4(3) of the Regulations published in terms of section 27(2) the Disaster Management Act, 2002, as amended

³⁰ Ibid.

³¹ National Assessment Circular 02 Of 2020 Implementation And Quality Assurance of the Amended 2020 Assessment Programme in the General Education and Training (Get) Band (Grades R-9).

assessment was not administered, removing the task from the learner's SBA and promotion mark and automatically redistributing the weight proportionally to other tasks.

Notably, no specific directions were provided regarding end of year promotion and progression, the implicit suggestion being that decisions be made on available assessment data on learners, however limited this might be.

At the FET level, June examinations were also cancelled³². The SBA component of the promotion requirements for Grades 10 and 11 was increased from 25% to 60%. Controlled tests were to replace examinations at the end of the year, and "should only be set on content taught, content not taught cannot be assessed"³³. The examination periods for the Matric preliminary and final examinations were shortened. External moderation of examinations at the FET level was either significantly weakened or suspended. The Matric preliminary examinations were to be internally set and moderated and no common examinations or tests were to be administered in Grades 10 and 11³⁴. Various circulars were issued regarding changes to practical assessment tasks for practical subjects.

At the time of writing, no explicit promotion and progression directives had been issued. Thus the vast majority of learners are likely to be progressed to the subsequent grade in 2021, based on existing assessments and a far greater weighting for SBA.

While the rationale for devolution in assessment practices is clear, and stems in large part from uneven coverage of curriculum content across schools, without support and monitoring this will likely result in diminished quantity and quality of assessments across schools, and huge inequalities in both. We have for a long time known the lack of reliability of school-based assessments of learners, and thus official end-of-year 2020 assessments and promotion decisions are likely to be unreliable in many schools³⁵. It is difficult to see what choice the DBE had in taking these decisions, given the very different levels of curriculum exposure across schools. They do, however, have significant implications for data on which to plan learning for 2021 as well as much greater heterogeneity in classes in 2021. As one principal put it: "The biggest anxiety about 2021 is the Grade 11s going into Grade 12. Because on average we have about 20 to 30 learners failing grade 11 in our school. For the first time we are faced with the prospect of all of them going to Grade 12"³⁶.

4.4 Remote learning

Throughout the policy process, and increasingly with the extension of the lockdown and further school closures in July-August, emphasis was placed on remote learning. The rotational timetabling models made compensatory learning at home essential to coverage of the curriculum. Discussions with school personnel indicated that the home learning component of the curriculum was incredibly difficult to manage and depended on the capacity of parents to engage, manage and assist with school work. Most of the provincial responses, at least initially, were web-based. Initial efforts at providing television and radio offerings were piecemeal, uncoordinated, poorly publicized and, for the lower grades especially, unconnected to the curriculum. More recent initiatives, like Woza Matric³⁷, have been more substantial, although also partial and limited in their offerings. For instance, high enrolment subjects like mathematical literacy and English First Additional Language are not covered and the televised lessons show no acknowledgement of the fact that the majority of learners are not first language English-speakers. There is no use of sub-titles, translanguaging or other devices

³² Circular E11 (2020, July). Implementation and quality assurance of 2020 School Based Assessment: Grades 10-12.

³³ Circular S7 Revised promotion requirements for Grade 10 and 11 for the 2020 year (para 5e).

³⁴ Ibid.

³⁵ Van der Berg & Shepherd, 2010; Lam et al, 2011. Every year the vast majority of SBA marks in the NSC are excluded from the final mark calculation due to there being more than 15% discrepancy between the final exam mark and the SBA mark (personal comment, former senior DBE bureaucrat).

³⁶ Principal discussion, 4 October

³⁷ Begun in September, Woza Matric programme ran for 12 weeks, screening Grade 12 revision lessons 4 hours a day, 7 days a week in 6 key subjects.

for multilingual communication. If the lessons are meant to compensate for lost contact time with teachers, they fall woefully short in this regard.

The Teacher Guidelines give a lot of emphasis and advice around blended learning and how to manage various aspects of at home learning. Although well-intentioned and well-organised, with no assumptions of connectivity on the part of learners, the proposals are largely unrealistic for the majority of schools and teachers. Coupled with the emphasis on remote learning, another notion that has become part of the discourse around curriculum recovery is the notion of **self-directed learning**. The School Recovery Plan document explains that this is

geared towards learners taking responsibility for their own learning. In the case of Self-directed learning, the learning material is prepared in such a manner that learners are able to progress from the known to the unknown on their own (or with minimal supervision), given the clear exposition and illustrated presentation of content; such content must be well scaffolded and mediated through templates and vivid examples³⁸ (p. 6).

At home learning, flexibility, blended models and self-directed learning all became part of the general policy thrust towards devolving responsibility for learning to the micro level - school, teacher and finally, individual learner. The notion of self-directed learning has potential to deepen inequalities in the same ways as digital offerings have. The opportunities to engage in self-directed learning are as unequally distributed as the resources required to do it.

4.5 COVID curriculum policy process summary

There are particular strengths that are evident in the curriculum policy development process in response to COVID-19. The impetus towards, and principles for, trimming the curriculum were sound, paying attention to issues of progression and coherence in subjects. Suggestions for which subjects could potentially be suspended were sensible and can be shown to be conceptually-grounded. Reducing the assessment requirements was also logical, especially reducing examination periods in favour of extended instructional time. Managing to retain the NSC examinations, the only high-stakes exit level examination with huge consequences for learners future academic and work opportunities, was a stellar achievement.

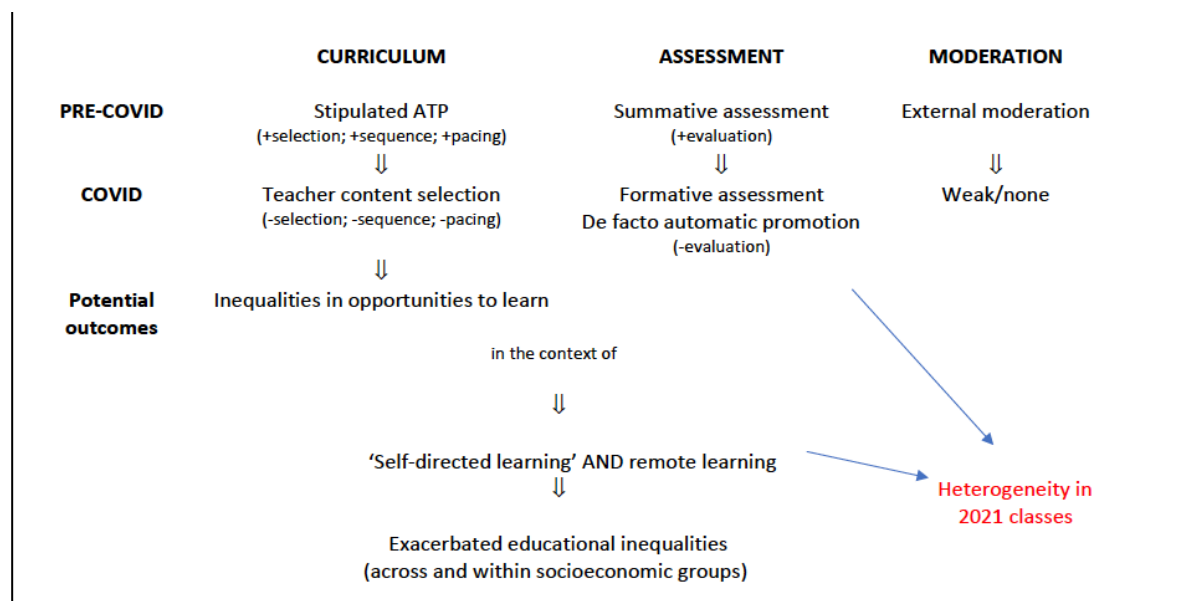
The shifts in curriculum policy (content, assessment and moderation) are shown in Figure 1 below. The diagram indicates the change from strong pre-COVID control to weak control over selection, sequence and pace of curriculum content, and from strong summative assessment to weaker forms of evaluation and external moderation. In the face of on-going and significant loss of teaching time, the DBE gradually ceded its centralised role in determining curriculum content and quality assuring assessments to schools and teachers, and an increased emphasis on self-directed learning and home learning placed greater responsibility on learners themselves. All this meant that curriculum coverage and assessment practices would vary considerably between schools and between learners in relation to home support. This in all likelihood will map onto and deepen pre-COVID levels of educational disadvantage. Figure 1 shows that greater classroom heterogeneity stems not just from home background factors but from devolving curriculum and assessment decisions to a very unequally capacitated system.

Policy reflects unrealistic notions of what most teachers, parents and learners are able to do in remedying the enormous loss of learning. The research base on South African teachers, which identifies teachers' low content knowledge, weak assessment practices and low motivation as binding constraints to delivering quality instruction³⁹ should raise a caution to continuing with weak external support and control over the selection, pace and evaluation of curriculum knowledge in the classroom.

³⁸ School Recovery Plan in Response to COVID-19, p. 6.

³⁹ Mohohlwane & Taylor (2015)

Figure 6: Curriculum policy shifts



5. What is to be done to support curriculum recovery and learning gains?

This part of the report draws out some key issues that emerge from burgeoning literature on curriculum recovery strategies. Six themes are drawn out from what amounts to a substantial degree of consistency across this literature around curriculum recovery strategies. Some of the current South African initiatives are flagged and questions regarding curriculum recovery and supporting learning gains are identified.

5.1 Instructional time

5.1.1 Acting quickly

Across a range of documentation relevant to COVID-19 curriculum recovery is an emphasis on the need to respond quickly to the crisis. One of the central reasons pertains to drop-out⁴⁰, and concern around a decline in students’ ‘school attachment’, particularly contexts of economic hardship for families. The other sources of urgency are the estimated 368 million children worldwide who rely on school feeding programs. There is also the need to address the mental health consequences of prolonged isolation of children and young adults from their peers⁴¹. The more curriculum-specific reason is that the opportunity gap for learning will grow as time goes on, with compounded learning losses for the most educationally disadvantaged.⁴² The impact of the pandemic on hard-won gains in learning for the worst off, both in South Africa⁴³ and more widely, was an issue flagged from the start of school closures⁴⁴.

⁴⁰ World Bank (2020)

⁴¹ World Bank (2020)

⁴² Iqbal et al (2020)

⁴³ Gustaffson & Nuga (2020)

⁴⁴ Iqbal, S., Azevedo, J., Geven, K., Hasan, A. & Patrinos, H. (2020, April 13).

5.1.2 Acceleration

A number of proposals in the literature suggest that in addition to a remedial approach to making up lost time, what is required are accelerated programmes. There is substantial evidence from around the world suggesting that summer and afterschool learning programs and learning camps, including those using trained teachers or volunteers, structured pedagogy, enrichment experiences, ability grouping and intensive teacher-student engagement made a significant contribution to learning gains for children from low-income households and those in low-income countries⁴⁵. These programmes have been used both for addressing periods of learning loss and providing pathways for out-of-school children to re-enter the education system. Emphasis is placed on targeting interventions to the most disadvantaged groups and tailoring interventions to specific contexts. They recommend prioritising what they regard as the two most vulnerable age groups: earlier grade children, where learning loss is most consequential for educational progress; adolescents moving from primary to secondary education, where the poorest are most at risk of dropping out⁴⁶.

Different approaches to accelerated learning have proven successful, including using smaller classes, ensuring high attendance and focusing on foundational numeracy and literacy skills, particularly in the learners' own languages⁴⁷; lengthening the school day or school year and utilizing school holidays. An example of the latter is the READS programme in the US that effected gains in reading skills by mailing ten books to students over the summer holidays matched to their reading interests, accompanied by email or text messages to parents to assist them in mediating the reading and questions based on the text⁴⁸.

Other accelerated programmes suggest lengthening the school day or school year, while some programmes have used holidays as additional learning time. Cattaneo et al (2016)⁴⁹ offer an interesting and important caution regarding adding instructional time. Although their analyses found that one additional hour of instruction per week increased PISA scores by between 0.05 and 0.06 standard deviations, the returns of the additional hour varied substantially by the initial level of achievement of the student and school, with less impact for students meeting basic academic requirements. They surmised that the differences could be attributed to many factors, such as different school environments, different teachers' attitudes, or different behavioural aspects, such as school discipline. However, they also argued that the differences in effectiveness of instructional time could also be the consequence of differences in pupil aptitude and consequent time needed to learn. Two issues are thus worth thinking about carefully in adding time to the school day. How *much* time is needed for those who need to catch up most and how will the time be *used* once allocated? Would finding ways of optimising the current use of instructional time in our context (which we know is very poor in many schools) be a more efficient way to proceed?

The only references to accelerated learning in the South African COVID-19 policy were two ideas in the School Recovery (though not taken up again in any other policy proposals). One was to lengthen the school day in order to recover lost instructional time. The other referred to accelerated learning and accelerated education programmes "which expose learners to intensive learning programmes that focus on core skills, values and knowledge". The latter idea was taken up in some provinces (including the Eastern Cape, Northern Cape and Free State) where private providers were contracted to run 'matric camps'⁵⁰.

⁴⁵ Mundy and Hares (2020)

⁴⁶ Ibid.

⁴⁷ Longden (2013)

⁴⁸ White et al (2014)

⁴⁹ The More, the Better? The Impact of Instructional Time on Student Performance Maria A. Cattaneo Swiss Coordination Center for Research in Education Chantal Oggenfuss Swiss Coordination Center for Research in Education Stefan C. Wolter University of Bern, Swiss Coordination Center for Research in Education, CESifo and IZA Discussion Paper No. 9797 March 2016

⁵⁰ See Sunday Times (13 September, 2020). Millions for 'outside' teachers, camps.

There are likely many different initiatives running in different schools. One example was mentioned by a Grade 3 teacher in a school running on a daily rotational model commented: “still rotating all grades on a one day on, one day off schedule. The biggest problem in our school seems to be Grade 1 - apparently major regressions in reading and writing and parents are super worried. So the plan from next month is for Grade 1s to start coming in every day: one normal school day and one day of intensive reading instruction with our learnership teachers (3rd/4th year B.Ed students)⁵¹.

- How do we optimise attendance and the use of existing instructional time in schools?
- Is there the capacity and inclination for accelerated programmes in our system?
- Would it be possible for early grades to return to a participate in reading camps earlier than 25 January 2021 given Foundation Phase teachers are not involved in NSC marking?
- How do we best utilise the full eight weeks of the fourth term?

5.2 Instructional content

5.2.1 Simplifying curriculum

A number of guidelines and documents emphasise the need to prioritize the most critical prerequisite content within subjects for learner progression in the next grade level⁵². A number of guidelines also recommend that schools be permitted to suspend some subjects for certain learners once it has been determined that it will be in the best interests of a learner.⁵³

A highly simplified curriculum was introduced in Sierra Leone in the wake of the Ebola crisis. The curriculum attempted to cover two academic years in one year. Details of the implementation of this curriculum and evaluation of its success is not available⁵⁴. However, suggestions are emerging that a similar approach may be adopted in South Africa. On 1 October, the Minister of Education announced that “we have revised the annual teaching plans to extend to next year”.⁵⁵ Details of this are yet to emerge.

In relation to suspending subjects, it was apparent from data from the Western Cape Education Department (the only data available at the time of writing this report), that only 47.3% of schools applied to drop subjects at the Senior Phase level, and interestingly, fewer reductions were done in districts with higher proportions of Quintile 1 to 3 schools. The reasons for the latter would be interesting to explore, but it was evident from discussions with school personnel that suspending subjects was a contested issue at school level and from a teacher union perspective⁵⁶.

5.2.2 Reading, writing and number concept in the early grades

The importance of focusing on foundational skills in the early grades is emphasised across the literature. Learning to read and write and acquiring number concept in the early grades lays the foundation for all subsequent learning. Not only is the learning at this level arguably the most important to recover, it is also where the losses have been shown to be most severe⁵⁷. As one principal put it: “The Foundation Phase has basically not been taught for the whole year and that is your fundamental base. You need strong teachers to deal with this. My teachers are worried sick

⁵¹ Grade 3 teacher, 3 September 2020

⁵² United Kingdom: Department of Education. Guidance for full opening: schools. Retrieved from <https://www.gov.uk/government/publications/actions-for-schools-during-the-coronavirus-outbreak/guidance-for-full-opening-schools>

⁵³ Ibid.

⁵⁴ Carvalho et al (2020)

⁵⁵ Mtetwa, A. (2020)

⁵⁶ Senior provincial education bureaucrat, 10 September 2020

⁵⁷ Kuhfeld & Tarasawa (2020).

about this. They had an abrupt closure and then nothing until now. And we need time to orient them. Human beings are not like machines. You can't just switch them on and off"⁵⁸.

- In what ways should the options of a simplified curriculum (reduced curriculum content and reduced subject offerings) be used in 2021?
- What subjects and grade levels require special attention in relation to critical content for progression through the grades?
- What strategies can be devised to catch up lost opportunities for reading, writing, counting and calculating in early grades?

5.3 Instructional level

There are two views in the literature regarding how to approach remediation of missed curriculum content. One asserts teaching missed material at the same time as continuing with grade level content. A joint framework by UNESCO, UNICEF, the World Bank, and the World Food Programme has called on education systems to implement large scale remediation programmes that teach missed content while resuming progress through the curriculum⁵⁹, asserting "the best evidence suggests that a both-and approach is the best one: Interventions should meet kids where they are, but not at the expense of access to challenging, grade-level curriculum. They should be timely and respond to specific learning gaps, but not replace core learning"⁶⁰. The other view is that a more productive way forward in remediation is 'Teaching at the Right Level' (TaRL). The approach is based on arguments that curricula, and resulting instruction, in many developing (and developed) countries are overambitious, covering many topics with limited time allocated to each. Teachers under pressure to complete the curriculum move through content before students can fully grasp the new knowledge. As a result, many children miss out on foundational and essential skills and fall farther and farther behind⁶¹. TaRL has a very limited evidence base and would prove difficult to implement in conventional systems. Nonetheless, the idea of targeting instruction at the level of students' learning is important, as is finding ways of dealing with high levels of within-class heterogeneity.

- If content from the previous year is taught, how will this happen? Concurrently with grade level content? Prior to the teaching of grade level content (emergency remediation)?
- If the latter, when and how is the switch to grade level content made?

5.4 Remote solutions

Although high income countries suggest the integration of remote teaching into on-going school curriculum planning for recovery⁶², in low- and middle-income countries remote learning solutions have failed to reach hundreds of millions of learners. UNICEF et al (2020) estimate, based on a survey, that at least 463 million students in low- and middle-income countries were not reached at all during school closures, representing 31% of total students in the countries surveyed. Where distance learning was available in the countries surveyed, they reached at most 62% of learners in the case of television and 24% in online delivery (UNICEF, 2020). In South Africa the 2018 General Household Survey shows that 78% of homes have no computer and 90% have no internet. Only in the wealthiest 5% of schools do at least 90% of learners have access to a computer and the internet at home⁶³. Distribution of printed material or increased budgets for printing has occurred in a number of provinces, and the use of

⁵⁸ Principal, 3 September

⁵⁹ UNESCO, UNICEF, World Bank, World Food Programme. (2020). 8

⁶⁰ Sawchuck (2020)

⁶¹ Beatty and Pritchett, 2015; Glewwe, Kremer, and Moulin, 2009

⁶² United Kingdom: Department of Education. Guidance for full opening: schools. Available at: <https://www.gov.uk/government/publications/actions-for-schools-during-the-coronavirus-outbreak/guidance>

⁶³ Gustaffson (2020)

WhatsApp and other mobile platforms has been widely reported although it is not clear how much impact those media have had.

Nonetheless, there is also evidence showing that across learning levels, lower-tech interventions (especially radio and television) have been shown to mitigate learning loss, especially when combined with teacher support and learning materials, and in developing country contexts. This includes evidence from developing country contexts like Sierra Leone⁶⁴ and Kenya⁶⁵.

Some positive outcomes around low-tech interventions in homes have emerged locally. There is considerable positive evidence and reporting of teachers working differently with parents and communities in the course of the pandemic. The support given to learners by members of their household has been identified as a crucial layer in how the impacts of school closures were felt⁶⁶. A number of studies are cited in the literature, such as Save the Children's Literacy Boost⁶⁷ and other family-based literacy interventions, that provide evidence of relatively simple interventions in the poorest households with limited resources contributing to better learning outcomes. During COVID, the WCED's @Home learning initiative brought together a wide range of NGOs, mostly in the area of literacy. Having identified 887 schools with vulnerable students, the aim is to pair every school with an NGO to support the distribution of learning material and support for additional learning in the home. They also engaged in the distribution of print material and learning packs during school closures. One of the strengths of the forum is that it coordinates *existing* initiatives and resources to support learning in homes avoiding the time and material costs of setting up a new initiative.

The key issue is to find low-tech, scalable technologies that can reach everyone, that include video or audio instructional input supported by lesson plans and materials. There is evidence of relatively simple interventions in the poorest households with limited resources contributing to better learning outcomes⁶⁸. Utilizing *existing* initiatives and resources to support learning is also key in avoiding the time and material costs of setting up new initiatives⁶⁹.

- Are there local, low-tech remote solutions that have proved effective for strengthening and expanding?
- What key levels and curriculum should be targeted in radio or television interventions?
- What existing initiatives can be leveraged to support more learning in homes?
- How can schools maintain and build on enhanced home-school relations where these have arisen during the COVID-19 period?

5.5 Assessment

Initially the focus in the pandemic was on cancelling or postponing high-stakes examinations⁷⁰. The emphasis fell to formative assessment for "gauging ongoing progress by identifying learner strengths and weaknesses"⁷¹. At the same time as advocating formative assessment, documents issuing from UNESCO, the World Bank and others acknowledge the challenge of this form of assessment: "Even in normal times, evidence has shown that many teachers do not have the tools or the knowledge to

⁶⁴ Barnett et al (2018)

⁶⁵ Five things to think about for out-of-school learning during the coronavirus (COVID-19) outbreak. Retrieved from <https://edtechhub.org/2020/03/24/five-things-out-of-school-learning-during-the-coronavirus-outbreak/>

⁶⁶ Winthrop (2020)

⁶⁷ Friedlander et al (2017)

⁶⁸ Winthrop (2020); Friedlander et al (2017)

⁶⁹ The WCED's @Home learning initiative that has brought together a wide range of NGOs and 887 schools with vulnerable students to pair every school with an NGO to support learning in the home is a notable example.

⁷⁰ Liberman (2020)

⁷¹ Unesco. (2020).

assess students' learning effectively, or to adapt their teaching to what those assessments show"⁷². Locally, while formative assessment has been seen as a key lever in curriculum implementation in South Africa during COVID-19 and more generally, research shows that assessment is used for promotion purposes with its formative potential largely unrealised⁷³.

Increasingly, especially as globally schools began to open up, the focus shifted to diagnostic testing⁷⁴ and assessment as a measurement of learning for purposes of remediation. Especially coming from advocates of TaRL, a call for 'back-to-school' tests at the commencement of a grade is proposed to enable the tailoring of educational programmes to the level of groups of learners⁷⁵.

Although most agree that valid and reliable diagnostic data is needed to guide curriculum planning and instruction, determining when and how to collect and interpret these data is complicated. Most of the sources are cautious around the administering of tests at this time. The idea that a no-stakes diagnostic test could give teachers quick, accessible and reliable information about what their students know, allowing them to target content at the appropriate level to address gaps is very attractive. Designing appropriate and effective diagnostic tests is, however, very specialised and complex. Some of the literature suggests that to the extent possible, systems should be using the assessments they already have⁷⁶.

Tests should also be linked to a clear purpose, and the key question to ask is: Who is making what diagnosis to inform which actions? Other useful advice is that not all grades and subjects should be treated alike when it comes to testing. Key subjects and transition points should be considered in planning assessment. And finally, where assessments don't exist, the burden of developing pre-assessments should not be placed on individual teachers.

- Who do we test? Key grade levels or all grades?
- What do we test? Foundational subjects? Mathematics and Languages only?
- Do we have the capacity to develop or refine benchmark or diagnostic tests by the beginning of 2021?
- Do we proceed with planned systemic testing?

5.6 Psycho-social needs

A wide number of documents draw attention to the need to pay attention to students psycho-social needs in the learning situation. Research on students displaced by Hurricane Katrina showed students had difficulty concentrating and often manifested symptoms of depression in the months following the hurricane. Many students will face food insecurity, loss of income and social and emotional issues in the home resulting from COVID-19. These will need to be taken into account in planning learning in the new year. On the other hand, getting back to regular school attendance and teaching and learning can also function as a stabiliser for children and communities alike. As one principal of a school located near a shack settlement in Cape Town said, "It is a positive thing that we bring them back to school. To shape our community. People see the children starting school again, then work can start again. To bring back normality into our communities as well. The school is an anchor in the community so it will help to bring back some normality"⁷⁷.

⁷² World Bank (2020).

⁷³ (DPME, 2017)

⁷⁴ United Kingdom: Department of Education. Guidance for full opening: schools. Available at: <https://www.gov.uk/government/publications/actions-for-schools-during-the-coronavirus-outbreak/guidance-for-full-opening-schools>

⁷⁵ Das et al (2020)

⁷⁶ Olson & Lake (2020)

⁷⁷ Principal, 3 September 2020

6. Conclusion – curriculum implications

A set of curriculum principles and related questions are derived from the preceding sections of the report. These are shown in Table 2 below:

Table 3: Curriculum principles for decision-making to support curriculum recovery and learning gains

Differentiation	Should districts or schools engage in different programmes of curriculum/learning recovery depending on an estimation of how much instructional time was lost?
Remediation	Should the previous grade's content be taught prior to or at the same time as grade level content? If prior to, when and how is the transition from one grade level to the next made?
Acceleration	Should an accelerated programme of intensive instruction be used to catch up content and learning at in key subjects or at key levels?
Streaming	Should learners be grouped according to learning loss / grade level competences given large and heterogenous classes (resulting from automatic promotion or prior, unreliable assessments)
Subject targeting/suspension	Should certain subjects be temporarily suspended depending on their implications for progression across grades, with concept-rich subjects prioritised and skills-rich subjects suspended / integrated?
Content trimming	Should curriculum be simplified by identifying critical or core content / concepts / skills within subjects?
Assessment	What form/s of assessment should be prioritised for recovery? When, how and at what level/s should assessment be done?

All of these decisions need to be made with the specific context in mind, in particular the level of support schools and teachers need in curriculum decision-making processes. Decisions also need to attend to the kinds of social support and pedagogies required as learners continue to experience psycho-social trauma as a result of the pandemic and its aftermath.

Finally, all planning and thinking in regard to curriculum recovery has occurred in relation to the national curriculum – the Curriculum and Assessment Policy Statement (CAPS). The CAPS, with its clear stipulation of content and pacing guidelines, has enabled the departments of education, schools and teachers to identify precisely what has and hasn't been covered. This is the strength of a highly specified curriculum. It has also enabled the identification of fundamental concepts, content and skills in terms of progression, because original stipulation was generally coherent and explicit across grades. There has been much talk in various fora currently around 21st century skills, competency-based reform and the 4th industrial revolution. While these are important complementary aspects to consider for the curriculum, they will *not* remedy the current crisis. The clear specification of what is to be taught and learnt, and when, is what requires attention. Criticisms of overload and unnecessary and repetitive content in the curriculum have been made. In a further trimming process these criticisms should be taken on board and further work done to strengthen the curriculum, not by moving it in the direction of generic skills (where it is difficult to tell whether they have been covered or not) but in the direction of clearer lines of progression in the most important concepts, content and skills in every subject.

7. Recommendations

Research shows that if learning losses are not dealt with timeously they will compound, especially for learners who are most disadvantaged and where heterogeneity in classes is high⁷⁸. The DBE and PEDs must offer targeted and strategic direction to schools in how to approach curriculum and instruction in 2021. For consistency and accountability, specifics around curriculum content and assessment must be provided, despite the very different levels of learning exposure in schools in 2020. Leaving decisions to schools and teachers is likely to increase inequalities in opportunities to learn. A set of five recommendations that build on the content of this report follow.

7.1 Timetabling models

If 2020 social distancing requirements persist into 2021 these need urgent attention for possible revision. The timetabling models, and particularly rotational models have had a devastating impact on instructional time, and as indicated above, are overly stringent. In addition, given the relative infection risk, different rules should apply in primary and secondary school contexts. Every effort should be made to get all learners and teachers back to school daily.

7.2 Curriculum differentiation

A number of proposals in the DBE curriculum policy process suggest curriculum differentiation, in particular distinguishing between core, advanced and developmental content for trimming⁷⁹, and in the option for schools to suspend subjects in the Senior Phase. The notion of curriculum differentiation needs to be taken further in 2021, especially given schools' very different levels of instructional time loss and different capacity to recover these losses. The language of core, developmental and advanced curriculum models could usefully describe a broader curriculum strategy where schools follow different programmes depending on learning losses:

Core Curriculum Programme – where schools suffered significant instructional time losses in all grades

Developmental Curriculum Programme – where schools suffered a moderate amount of instructional time loss

Advanced Curriculum Programme – where schools suffered little to no loss of instructional time

Districts need to provide schools with support in identifying and adopting the appropriate curriculum programme. Defining the curriculum content coverage requirements and assessments for different programmes would provide teachers with the necessary support and accountability to get learning back on track. Leaving these decisions solely to schools and teachers is likely to widen the education inequality gap.

7.3 Subject targeting and curriculum trimming

The DBE developed sound criteria for trimming and the identification of core content and made significant inroads with this in the Revised ATPs and the Fundamentals. These processes should be extended and consolidated in relation to the three curriculum programmes identified above. New iterations of the Fundamentals and Revised ATPs need to be developed for schools following the Core and Developmental Curriculum Programme that include necessary content from 2020 in the 2021

⁷⁸ Gustafsson and Nuga Deluwe (2020) model learning trajectories with and without catch-up strategies, showing a recovery range of five years with concerted efforts to intervene, and 10 years with business as usual schooling.

⁷⁹ Based on the DBE's criteria for school-based trimming and organization, in DBE (2020) *Teacher Guidelines for the Implementation of the Revised ATPs* (p.5).

programme of learning. Schools following the Advanced Curriculum Programme could follow the normal ATPs, or a revised version that retains sensible cuts made in 2020.

Where schools follow the Core or Developmental Curriculum Programmes, the suspension or integration of some of the skills-rich subjects and content-rich subjects should be **mandatory** for 2021. The core curriculum for Home Language, First Additional Language and Mathematics from the prior grade should be prioritized from Grades 1 to 9 in any instructional time that is saved. Integration of Life Skills into Home Language in Foundation Phase should be continued, but clearer direction provided to teachers on how to achieve this.

The use of existing resources, especially the DBE Rainbow Workbooks, should be used in catching up curriculum content from prior grades. These books are carefully aligned to the curriculum and are easily reproduced at a low cost⁸⁰.

Districts need to provide schools with assistance in developing timetables for different curriculum programmes.

7.4 Assessment

Teachers need to be provided with support and guidance in diagnosing their learners' learning gaps. The DBE could build on its existing diagnostic test bank⁸¹ as a resource for teachers. Teachers need to be provided with clear grade level benchmarks (the 'Fundamentals' could be a useful starting point for this) for all grades and subjects. Exemplars of assessments content/concepts and skills at different levels would be very useful.

Any longitudinal testing that forms part of research, and any planned systemic testing should go ahead. This will produce useful data that in some instances will be generalisable to the whole population of learners providing a more reliable estimate of how much learning was lost⁸². Test data should be used only for diagnostic and planning purposes, not accountability purposes.

7.5 Targeted accelerated learning

7.5.1 Reading in the early grades

All teachers from Grade 2 to Grade 5 need to assess their learners' reading at the beginning of 2021. Adapted versions of the available EGRA and ASER style tests (available in all African languages) could be administered by teachers to diagnose learners' approximate levels of reading, also in reference to new reading norms/benchmarks⁸³. Teachers will need support in how to interpret and act on the test results. These benchmarked tests will make it possible for schools and teachers to establish standards and targets to aim for, to determine how many children are on track with reading and target groups of learners for remedial reading instruction⁸⁴. This also opens up possibilities of dealing with learners' pre-COVID learning backlogs.

Intermediate Phase teachers should be provided with explicit training in guided/shared reading and phonics, so that they can teach foundational reading skills to their learners if necessary⁸⁵. Based on these diagnostic tests, every learner must be provided with an appropriate grade-level Vula Bula

⁸⁰ Other existing material could also be considered, such as those developed NGOs and intervention projects.

⁸¹ Tests developed for grades 3, 6, and 9 in Mathematics, English Home Language and English First Additional Language. <https://www.education.gov.za/Curriculum/AnnualNationalAssessments.aspx>

⁸² For example, the WCED systemic tests written annually in Grades 3, 6 and 9 since 2002 will be written in 2020.

⁸³ Recent groundbreaking work in establishing benchmarks for reading in Nguni languages make it possible now to use these tests to establish what children should be able to read at different grade levels. See Ardington et al (2020).

⁸⁴ *ibid*.

⁸⁵ Burrige, B. (2020). Online early grade reading teacher training courses such as that developed by Funda Wandé could be used for this purpose.

anthology⁸⁶ to keep. Teachers should be assisted by their districts to group learners for targeted reading instruction.

Ideally, Grades 1 to 5 should return to school two weeks earlier than other grades in January 2021 and commence with remedial reading strategies. A Literacy Boost style intervention (see above) should also be planned for the December-January holidays using Vula Bula anthologies or other available material (possibly via networks of NGOs).

7.5.2 Grade 4 and 5 FAL

Approximately 80% of Grade 3s in 2020 will transition to English as a Language of Learning and Teaching (LOLT) in Grade 4 in 2021. They would have received very little instruction in English First Additional Language (FAL) in preparation for the transition to English. Similarly, the Grade 4 level in 2020 suffered amongst the most losses of instructional time due to school closures and will transition to Grade 5 with little exposure to English as the LOLT in the previous year. Life Skills should be reduced and integrated into the teaching of both Home Language and FAL at the Grade 4 and 5 levels for 2021 and the additional four hours gained allocated to English First Additional Language. Specific guidance in this respect should be provided for teachers.

7.5.3 Grade 11 and Grade 12

Because promotion and progression requirements have been relaxed for 2020, there will be much bigger and more heterogenous cohorts in Grade 11 and Grade 12 in 2021. School should be extended by one hour per day for streaming and more targeted teaching in key subjects for these grades. Maintaining the 2020 durations of the NSC preliminary examinations to three weeks and the final examinations to a month would also save teaching and learning time. The June examinations should become tests. A learner could gain roughly 80 days of teaching and learning time by staying just an hour longer at school over a two year period. This would allow current Grade 10 students to catch up almost all the days of learning time they lost in 2020 by the time they write the matric exam.

7.6 Targeted, *additive*, low tech strategies for remote learning

Remote learning of whatever kind must not be used to *compensate* for the role of the school as the primary provider of instruction. Rather, quality assured, *additive* strategies that target particular subjects or groups of learners are recommended. A considerable amount of ‘noise’ has been created by the vast number of partial and fragmented offerings available. The DBE needs to put energy behind a limited number of targeted low-tech, scalable technologies that can reach everyone. The success especially of television in Mexico and Kenya is notable in this regard. The areas targeted could be:

- Key subjects in FET in preparation for the NSC (building on the Woza Matric programme)
- Programming in early reading and early mathematics, in multiple languages
- English as a First Additional Language and as a Language of Teaching and Learning (LOLT).

⁸⁶ These are collections of 16 – 20 stories (200 pages) in full colour at different grade levels in all African languages. They can provide learners with much needed reading material that they can work through with caregivers, siblings or neighbours. They can be rapidly and cheaply printed.

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