DIAGNOSTIC REPORT

ANNUAL NATIONAL ASSESSMENT 2012

basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

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FOREWORD BY MINISTER

The purpose of this Diagnostic Report is to highlight and present to teachers and School Management Teams (SMTs) specific areas of Language and Mathematics knowledge and skills in which learners who participated in ANA 2012 were found to be inadequately equipped. The evidence in this report must be built into normal teaching programmes and also used to inform specific interventions to improve the levels and quality of learner performance in schools.

The report also provides SMTs with objective evidence to identify areas in which individual teachers need specific support in terms of both content knowledge and various methods of facilitating learning. Identified areas of required support will also influence the choice of relevant teaching and learning support materials. The report presents critical aspects of knowledge and skills inadequacies that were identified from random samples of Grades 3, 6 and 9 learner scripts in the Language and Mathematics tests of the ANA 2012 cycle. The findings in this report will, therefore, be applicable to public ordinary schools in South Africa.

I invite all stakeholders and the broader South African public to receive this report and view it as an important milestone towards tracking progress towards the achievement of learning outcomes in our schools, as we continue to improve the quality of basic education.

MRS A.M MOTSHEKGA, MP
MINISTER OF BASIC EDUCATION
DATE: 24 May 2013

1. INTRODUCTION

The Department of Basic Education (DBE) conducted the Annual National Assessment (ANA) in September 2012 on learners in Grades 1–6 and Grade 9 in Language and Mathematics. The purpose of the ANA is to determine what learners can and cannot do with regard to the skills and knowledge that they have acquired as a result of teaching and learning experiences in school. After the administration of the ANA tests, the DBE compiled this diagnostic report in which an analysis is made to provide evidence that will inform and direct appropriate interventions for (a) teaching and learning, (b) management of curriculum implementation by School Management Teams (SMTs), (c) curriculum and management support at district level and (d) resource provision and monitoring at provincial and national levels.

2. PURPOSE AND SCOPE OF THE REPORT

The purpose of this report is to highlight and present to teachers and School SMTs specific areas of Language and Mathematics knowledge and skills in which learners who participated in ANA 2012 were found to be inadequately equipped. The evidence in this report must be built into normal teaching programmes and also used to inform specific interventions to improve the levels and quality of learner performance in schools. The report also provides SMTs with objective evidence to identify areas where individual teachers need specific support in terms of both content knowledge and various methods of facilitating learning. Identified areas of required support will also influence the choice of relevant teaching and learning support materials.

The report presents critical aspects of knowledge and skills inadequacies that were identified from random samples of Grades 3, 6 and 9 learner scripts in the Language and Mathematics tests of the ANA 2012 cycle. The findings in this report will, therefore, be applicable to public ordinary schools in South Africa.

3. METHOD USED TO COMPILE THE REPORT

As part of verifying the quality and consistency of marking of the ANA scripts which was done at individual school level, the DBE and Provincial Education Departments (PEDs) collected random samples of marked scripts from each school that had learners in Grades 3, 6 and 9 and arranged centralised re-marking of the scripts in district centres.

From the re-marked scripts, a sub-sample was collected for capture of marks per item so as to analyse the information at item or individual question level to identify the nature and quality of the responses that learners gave to questions.

The findings of the analysis of inadequacies have been exemplified with specimens of typical learner responses and, where appropriate within the scope of the report, suggestions and recommendations have been made on possible strategies that can be considered for appropriate interventions.

This report deliberately avoids technical detail involved in the analysis and rather focuses on key curriculum content and implied teaching methodology aspects that the ANA 2012 assessment showed as requiring specific attention in order to improve learner performance in the system.

4. SUMMARY OF KEY FINDINGS

The following tables summarise some of the key findings with regard to performance in (a) Language and (b) Mathematics.

Table 4.1 summarises overall areas of strength and weakness in the Language performance of learners.

Table 4.1 Summary of key findings: Language

AREAS OF WEAKNESS	AREAS OF STRENGTH
• Many learners cannot read with comprehension. • Many learners are not able to produce meaningful written outputs (i.e. they write words and sentences that are completely incoherent). • Learners lack the ability to make correct inferences from the given information in a text. • Learners' knowledge of grammar is very limited (e.g. tenses, verb use in singular form versus plural form). • Learners struggle to spell frequently used words correctly. • Handwriting, particularly in the Foundation Phase, still leaves much to be desired in many cases.	• Learners are able to produce well-written texts where specific prompts are given. • Learners are able to extract information directly from a given text. • Learners respond very well to visual prompts. • Learners are able to provide a short answer that does not require reasoning.

The most striking weakness in **Table 4.1** is the inability of learners to read with understanding. Reading with comprehension is a cornerstone of the learning process. Therefore, it is very important for teachers to concentrate on the improvement of this important skill.

The observation that learners from Grade 3 up to Grade 9 level tend to perform better mainly when given visual cues or pictures requires special attention because, as learners progress up the grades, they also need to develop thinking skills to handle abstract ideas and not only depend on visuals to solve problems. Learners must progressively be given opportunity to solve complex problems and develop high order skills. A comprehensive list of proposed interventions accompanies the grade-specific sections of this report.

Table 4.2 summarises overall areas of strength and weakness in the Mathematics performance of learners.

Table 4.2 Summary of key findings: Mathematics

AREAS OF WEAKNESS	AREAS OF STRENGTH
• Relative sizes of fractions (i.e. arranging fractions in increasing/decreasing order) • Word problems, e.g. not able to respond to the question: 'How much less/more?' • Number concept as demonstrated in being able to count forwards and backwards • Subtraction that requires 'borrowing' from tens to units • Application of knowledge of fractions and percentages in given contexts (word problems) • Simple calculations involving speed, distance and time • Data handling involving simple calculations, e.g. calculating the median of a given data set • Probability • Converting measures (e.g. grams to kilograms) • Space and shape (geometry) • Working with more than one concept in a question (e.g. concepts of ratio, area and transformation in the same question) • Calculations based on algebraic expressions and equations that involve exponents, factorisation, working out of 'simple interest', etc.	• Performing simple addition and subtraction of whole numbers, particularly at Grade 3 level • Responding to questions where visual prompts are given • Identifying simple patterns of numbers, e.g. patterns where given numbers have a common difference

Noticeable from **Table 4.2** is the fact that there are more weaknesses than strengths. Like in Language, in Mathematics learners also responded better to visual cues than to textual prompts.

While the use of visual aids or cues is an important scaffold to help learners at the concrete level of developing understanding, teaching should progressively proceed to present learners with appropriate opportunities to optimally stretch their understanding to interact with ideas at the abstract level of reasoning.

5. ANALYSIS OF RESULTS BY GRADE AND SUBJECT

The following section of the report presents findings and recommendations for each grade and the subjects that have been sampled in that specific grade, as follows:

Grade 3: Mathematics and English Home Language

Grade 6: Mathematics, English Home Language and English First Additional Language

Grade 9: Mathematics, English Home Language and English First Additional Language

For each grade and subject the presentation begins with a discussion of curriculum content knowledge and skills that learners found most difficult to demonstrate. Where appropriate, specimens of typical learner responses are given to illustrate the nature and extent of the inadequacy. Recommendations are then made on possible intervention strategies that could be considered to address the deficiencies. It is important to note that the intervention strategies recommended in this report are not exhaustive. More or even better interventions should be explored for each situation.

5.1 GRADE 3 MATHEMATICS

In this section, identified 'gaps' in specific skills, knowledge and competencies that were displayed by Grade 3 learners in Mathematics have been presented.

Specific knowledge and skill 'gaps'

The following were some of the identified knowledge and skill 'gaps' or areas where Grade 3 learners demonstrated either lack of, or inadequate, understanding in Mathematics:

5.1.1 Arranging fractions in increasing/decreasing order

Poor performance in Grade 3 Mathematics was observed in demonstrating understanding of relative sizes of unitary fractions, including halves, quarters, eighths, thirds, sixths and fifths according to the Curriculum and Assessment Policy Statement (CAPS, p.78). Learners were supposed to arrange fractions, given in words rather than in number symbols, from the smallest to the biggest.

A typical learner response is given below.
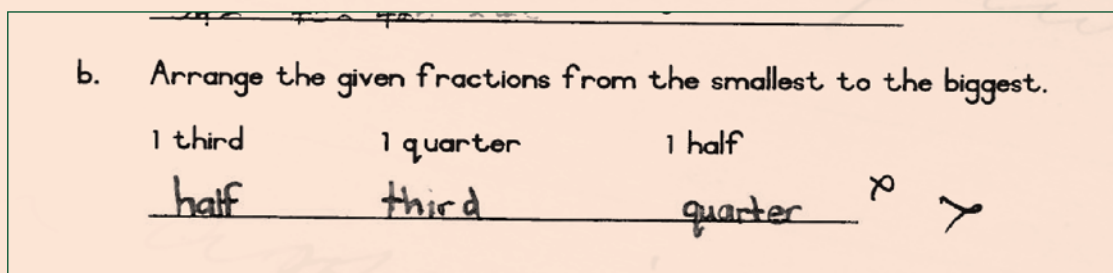
The above response illustrates a common misconception about fractions – that a fraction is larger when the denominator is a larger number, i.e. ¼ is larger than $1/3$ which in turn is larger than ½.

Even though in this case the fractions are given in words, it would appear that the underlying misconception is the same. Practical exercises with real objects, clearly explained and also expressed in writing will serve to consolidate understanding of this important concept.

Proposed interventions

- Fractions should be taught practically, e.g. cut an apple into half, quarters, etc. That will help learners to relate to a half and to a quarter, and understand which one is bigger than the other and vice versa.
- Learners should be taught fraction names according to the CAPS document.
- Learners should be made aware that the bigger the denominator, the smaller the fraction when they have to compare fractions that have the same numerators.
- Seeing that learners respond well to visual prompts, it is advisable to have drawings of objects cut into different size fractions and labelled accordingly. Such drawings can be pasted onto a big chart and hung on a wall to serve as a constant reminder to learners about the size of different fractions.

5.1.2 Numbers, operations and relationships

Learners demonstrated weak understanding and inadequate computation skills to solve word problems in transactions that involve buying and selling. Given a situation where they had to interpret a price list and, thereafter, do computations that demonstrate understanding of the concept or relationship of 'How much **'less'**, the majority of learners were found to be extremely lacking in this important number concept.

Question 7, for example, gave a price list and then posed questions as follows:

Price List		
Cooldrink	**R3,40**	
Packet of chips	**R1,00**	
Rolls	**R1,50 each**	
Sweets	**35c each**	

Below is a typical learner response to a question based on the above prompt.

7 b. How much less will you pay for 5 sweets than for 1 cooldrink?
I will R2,50.
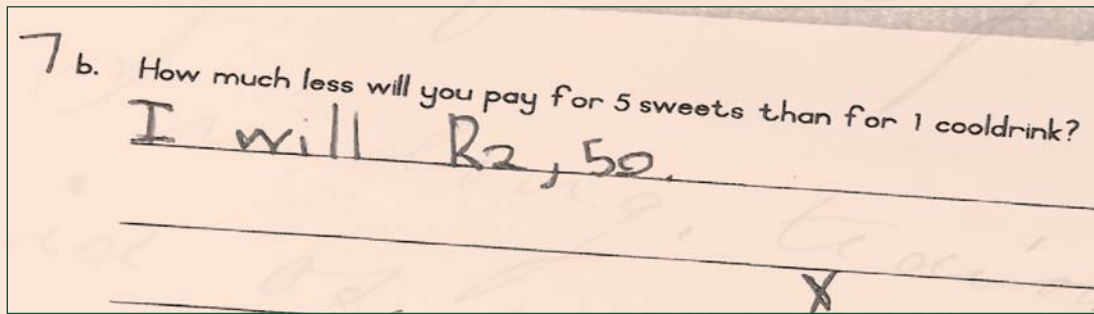
The response shows that either the question was not properly understood – a weakness that was evident in the entire assessment – or the comparing concept that was required was inadequately developed. The problem required a learner to understand that they needed to compare two amounts or numbers, apply basic computational skills and conclude on the relative sizes of the amounts as follows:

Each sweet costs 35 cents and 5 of them will therefore cost: 35 cents x 5 = R1,75. A cooldrink costs R3,40. If the learner conceptualised that '**less**' implies a difference or subtraction, they would then proceed to subtract the smaller amount from the larger and get the answer: R3,40 – R1,75 = R1,65.

The process has a few steps that the learner needs to follow in a logical fashion and, therefore, requires high order skills. Learners must be trained on how to reason when solving complex problems.

Proposed interventions

- Learners should be encouraged not to isolate numeracy skills from day-to-day life, e.g. shop activities can be role-played regularly so that the basic numeracy skills are entrenched in the learners' minds and they can calculate change with minimal effort.
- Teaching learners repeated word problems is crucial. The teacher should encourage learners to make sure that they understand the meaning of each sum before attempting to calculate the answer.
  Learners must grasp that in order to understand the meaning of a word sum, the word sum must be divided into small bits, and the learner must constantly ask himself/herself what each part actually requires.
- Simple Mathematical formulae must be taught regularly, so that when a word sum is phrased in a certain way, a learner must quickly recognise a formula to be used to get an answer to that particular word problem.

NOTE: *Teachers are encouraged to do DBE workbook activities when teaching and assessing learners on identified areas of weakness over and above the proposed interventions. ANA exemplars should be used as a resource tool to practise different styles/modes of assessment.*

5.1.3 Time

The concept of time, its proper representation and related calculations proved very difficult to the learners, particularly when it involved converting time written in words to writing it in numbers (CAPS, p.86).

Below is a typical learner response to illustrate incorrect understanding of how time is represented and the kinds of computations that show weak knowledge of factual information about time.
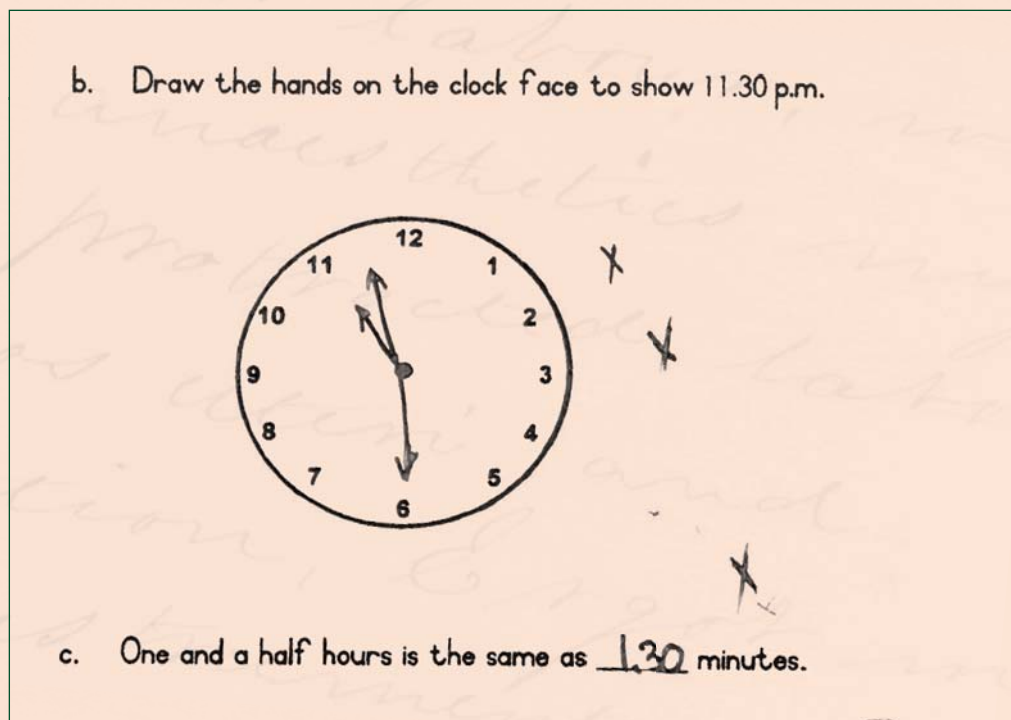
Proposed interventions

- Teachers must bring a real analogue clock to read and write analogue and digital clock time in hours and half-hours. It is advisable to have an analogue clock in each and every classroom.
- Learners can be given regular exercises whereby they role-play real-life activities based on time. This can help them understand the concept of time while getting trained on word sums that involve time.

5.1.4 Space and shape

In one question learners were requested to write the total number of tiles needed in a frame: "How many tiles will I need to tile this frame completely?"

The question was about investigating and calculating area using tiling (CAPS, p.90). Learners did not perform well in this question.

Below is a typical learner response.
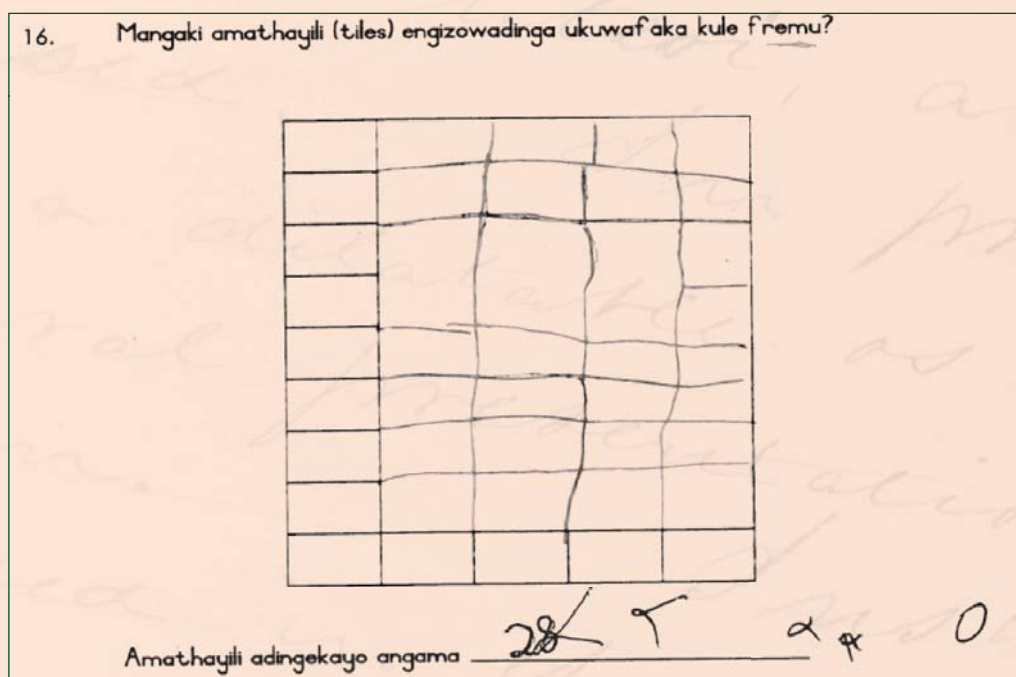
(English version: 16. How many tiles are required to fill this frame?

The number of required tiles is _____.)

From the response it would appear that the 'gaps' shown on the rough sketch could actually be a reflection of conceptual 'gaps' in the understanding of the learner. It is not clear how the answer of '28' could have been arrived at, even given the learner's inaccurate drawing.

Proposed interventions

- Teach the concept of area according to the CAPS document.
- Mental exercises to develop the basic foundational numeracy skills should be done daily. The teacher should use all the resource books from the DBE.
- In the Foundation Phase, it is very important to use charts and display them, even if a concept has been taught already. Looking at the charts of material that has been taught already helps to reinforce that knowledge. The use of number and name charts as well as number symbols is encouraged.
- A simple Mathematics dictionary can be written in chart form, giving definitions of commonly used terms.
- Learners should be taught formulae for calculating area and perimeter.

5.2 GRADE 3 ENGLISH HOME LANGUAGE

In this section identified 'gaps' in specific skills, knowledge and competencies that were displayed by Grade 3 learners in Home Language have been presented.

Specific knowledge and skill 'gaps'

The following were some of the identified knowledge and skill 'gaps' or areas where Grade 3 learners demonstrated either lack of or inadequate understanding in Home Language:

5.2.1 Interpretation of information

The ability to interpret information given in different formats is an important skill in Language. Some of the difficulties that learners seemed to have in demonstrating ability to interpret information given in graphical form have been exemplified by the typical learner response on the following page:

14.   Use the chart below and answer questions 14.1 and 14.2.

Ages of children in the class

Number of children	7 years	8 years	9 years	10 years
10			☺	
9			☺	
8			☺	
7			☺	
6			☺	
5			☺	
4			☺	☺
3		☺	☺	☺
2		☺	☺	☺
1	☺	☺	☺	☺

14.1 Circle the letter next to the correct answer.

Most of the children in the class are ... years old.

A   7

Ⓑ   8

C   9

D   10

> 14.2 Circle the letter next to the correct answer.
>
> How many children are a year younger than most of the children in the class?
>
> A 4
> B 3
> C 2
> (D) 1

Learners were expected to apply literacy skills (interpretation of information) in a situation that involved numeracy concepts. The response shows that many Grade 3 learners lacked the skills to apply knowledge in situations that require an integration of literacy and numeracy skills.

Proposed interventions

- Teachers could do well to assess different skills on a regular basis. This empowers them and leads to an understanding that coping with life demands the use of different skills.
- Graphs should be used regularly in class as a means of summarising or presenting information.
- Teachers must use language lessons to link with other learning areas, thus empowering learners to perform well in all subjects and to understand questions.

5.2.2 Punctuation

When learners can write sentences that are correctly punctuated, it is an indication that they write with full understanding. It is important that learners should learn correct forms of writing, which include using correct punctuation of sentences to communicate meaningfully.

In many instances learners showed significant inadequacy in writing meaningful correctly punctuated sentences. A typical attempt at punctuating a given sentence has been shown below:

> 11. Rewrite the following sentence using the correct punctuation.
>
> when is my brothers birthday
>
> When is my Brother birthday

The skill of writing and writing with precision can only be learnt from extensive reading and reading for pleasure.

Proposed interventions

- Teachers should use reading lessons to teach punctuation. Learners must be encouraged to read regularly and observe punctuation marks.
- Daily exercises must be given where learners are required to punctuate sentences or short passages.
- A chart with different properly punctuated sentences should be displayed in the classroom so that learners get used to commonly used punctuation marks.

5.2.3 Sequencing events

One way of assessing whether learners read with understanding is asking them, after reading a text, to provide a summary of the sequence of events in a story. The majority of Grade 3 learners cannot give a correct sequence of events after reading a short given story. This deficiency can only be rectified by giving learners as many reading opportunities as possible.

Proposed interventions

- Teachers should use reading lessons to teach sequencing. Daily exercises can be given whereby learners have to arrange sentences into the correct sequence.
- Literature lessons can also be used to teach sequencing. When learners relate events of a story they are reading in their prescribed texts, correct sequencing must be emphasised.
- Learners can be asked to tell the class what they do at home from the moment they wake up to the time they go to bed. That can also train them in the skill of sequencing events.

5.3 GRADE 6 MATHEMATICS

In this section identified 'gaps' in specific skills, knowledge and competencies that were displayed by Grade 6 learners in Mathematics have been presented.

Specific knowledge and skill 'gaps'

The following were some of the identified knowledge and skill 'gaps' or areas where Grade 6 learners demonstrated either lack of, or inadequate, understanding in Mathematics:-

5.3.1 Numbers, operations and relationships

Numbers, operations and relationships constitute an integral component of Mathematics. The content knowledge and skills that characterise these areas determine the extent to which learners will make success of their experiences in Mathematics. Learners generally displayed acute inadequacies in the basic knowledge and competencies that are required to achieve success in numbers, operations and relationships.

The following example illustrates the deficiencies and misunderstandings that seemed to characterise learner competency in the affected areas:

7. Calculate the answers in Questions 7.1 to 7.6.

7.1 654 + 235 583 + 32 912

$$\begin{array}{r} 6\overset{1}{5}4 \\ +235\,583 \\ \underline{32\,912} \\ 121\,8703 \end{array}$$ ✗

✗

C

(2)

7.2 394 067 − 63 625

$$\begin{array}{r} 3\,94067 \\ \underline{63625} \\ 59817 \end{array}$$ ✗

✗

C

(2)

🖙 7.3 6 960 ÷ 145

$$\begin{array}{r} 55 \\ 145\overline{)6960} \\ 625 \\ \underline{67110} \\ -625 \\ 95 \end{array}$$ ✗

$$\begin{array}{r} 1451 \\ 145 \\ 290 \\ x\quad 2 \\ \overline{580} \\ -290 \\ +145 \\ \overline{3353} \\ +145 \\ \overline{4806} \\ +145 \\ \overline{6255} \\ +145 \\ \overline{760} \end{array}$$ ✗

C

①

(3)

Grade 6 Mathematics English   4

23. Tamara invited 37 friends to her party. Each friend may drink 2 glasses of cool drink. If each glass holds 200 mℓ, how many 2-litre bottles of cool drink should her mother buy?

$$\begin{array}{r} 200 \\ x\quad 37 \\ \overline{1400} \\ +6000 \\ \overline{7400} \end{array}$$

$$200\overline{)7400}\quad 37 - 37\,2\ell$$ bottles of cooldrink

$$\begin{array}{r} 600\downarrow \\ \overline{1400} \\ 1400 \\ \overline{1400} \end{array}$$ ✗

O

(3)

The learners' performance in pure sums, where they had to perform basic mathematical operations without any distracting language components, was no different from performance where they had to interrogate textual information and translate it into mathematical expressions and computations. Gross misunderstanding of basic mathematical operations was evident, regardless of the format in which questions were crafted, i.e. pure sums, word problems and even multiple-choice questions (MCQ) as illustrated in the typical response below:

1.4 Calculate: $4 \times (12 - 8) + (4 + 0) \times 1$

A   8
Ⓑ   16
C   0
D   4

Proposed interventions

- Teachers should acknowledge that, since Mathematics is an abstract subject, learners may find it difficult to understand. Great care should be taken therefore to teach Mathematics with concrete objects.
- Practice makes perfect. Learners who practise their basic operations daily have a greater chance of performing better than those who do not.
- Learners should be encouraged to find real-life situations where Mathematical concepts are applicable. That could help in facilitating the understanding of Mathematics as an integral part of life, and that could motivate learners to approach Mathematics with interest.
- There is a need to train learners in basic **counting in multiples** (of 11, 12, 13, etc.). This skill is powerful for **early understanding** (internalisation) of basic operations, such as addition and multiplication.

5.3.2 Place and number value

Knowledge of place- and number-value is critical for making intelligible computations and comparisons of numbers. Grade 6 learners demonstrated serious misunderstanding of these concepts and this could explain why most of them could not perform basic mathematical operations. A typical example of the extent of the misunderstanding has been shown below:

3.   Write the number in digits.
Four million two hundred and eighty three thousand one hundred and sixty-four.
_4 000000 283 164_   (1)

Most learners could not **differentiate between place value and number value**. For instance, the **value** of the underlined digit in 367 0<u>4</u>9 215 is *40 000* or *40 thousand*, whereas its **place value** is *thousands*, and not vice versa. This was also reflected in the failure of learners to round off numbers correctly. For example, where learners were required to round off numbers to the nearest 5, they simply added or subtracted a 5 respectively to a given number. Instead, they should have rounded off using knowledge of place value, e.g. 29 702 to the nearest 5 = 29 700 and not 29 697 or 29 707. This could be the reason why they performed poorly in Mathematical operations such as addition, subtraction, multiplication and division.

The learner typical response below indicates the apparent lack of understanding of number value:

5. What is the value of the underlined digit in the following number?

367 049 215 _TTh_ Ten thousands   (1) ✗

Proposed interventions

- Learners should be given a chance to practise the application of knowledge of number and place value by allowing them to work in groups and multiply continuously on charts, e.g. 10 x 10 = 100; 100 x 100 = 1 000; 1 000 x 1 000 = 100 000, etc.
- Wall charts can also be put up on the walls to emphasise the value of numbers.

5.3.3 Addition of mixed numbers

Most learners could not add mixed numbers (**whole numbers and fractions**). For instance, given two mixed numbers to add, the majority of the learners tended to add denominators and numerators separately to get an answer. Typical examples of the misconceptions have been given below:

8. Calculate the answer in Questions 8.1 and 8.2 and write your answer as a mixed number.

8.1 $8\frac{3}{10} - 4\frac{1}{5}$

$$8\frac{3}{10}$$
$$-4\frac{1}{5}$$
$$\overline{4\frac{2}{5}}$$ ✗ α   (4)

8.2 $5\frac{1}{2} + 3\frac{1}{8} + \frac{3}{4}$

$$5\frac{1}{2}$$
$$+3\frac{1}{8}$$
$$+\frac{3}{4}$$
$$\overline{8\frac{5}{14}}$$ ✗ α   (4)

Proposed interventions

- Learners should be taught to use various strategies when dealing with addition, subtraction, multiplication and division of numbers.
- The use of number and name charts and number symbols is encouraged. Correct Mathematical knowledge should be effectively utilised.
- Daily mental exercises to develop basic Mathematical skills should be done and closely monitored by schools and district curriculum support teams.

- Support to teachers in terms of content knowledge, effective methods of teaching specific aspects of numeracy/mathematics, e.g. the ability to identify key words, concepts and operations. There should also be a period that tackles word problems in the school timetable daily.
- Regular high quality school-based assessment: class teachers, school management teams.
- It is recommended that the challenges identified through ANA must be linked to relevant sections in the DBE workbooks that learners use (integration).

5.3.4 Patterns, functions and algebra

Good understanding of mathematical patterns, functions and algebraic expressions and sentences (equations) is critical to doing mathematics. Not only should learners be able to identify patterns and functions, but they should also be able to formulate equations that represent real contexts. The typical example below illustrates some of the erroneous conceptions that Grade 6 learners demonstrated:

1.3 Select a number sentence to match the following statement:

Seven less than a certain number m is equal to twelve.

A. $7 - m = 12$
B. $12 - m = 7$
C. $m + 7 = 12$
D. $m - 7 = 12$

(1)

In the example above, learners were expected to select Option D but the majority of them selected Option A. It must be acknowledged here that the language used may have confounded the intended message, but it must also be noted that mathematics is done in social contexts that involve use of language.

Below are a few other typical examples of learner responses which illustrate various misconceptions.

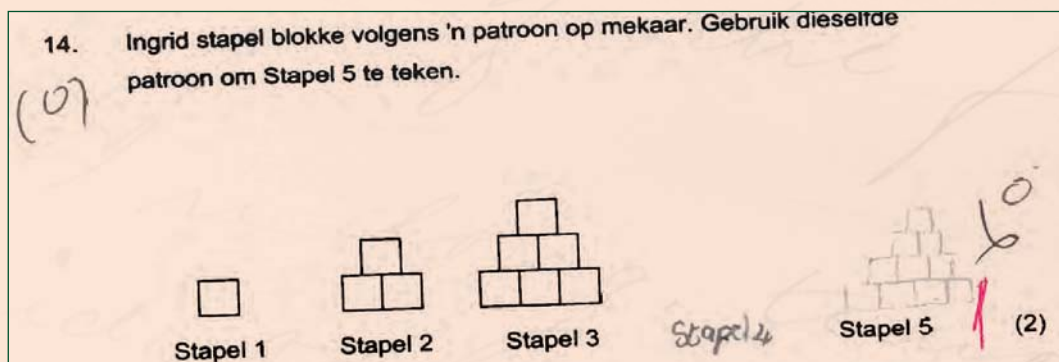10. Write down the next number in the sequence.

$1 ; 1 ; 2 ; 3 ; 5 ; 8 ;$ 12

(1)

1.6 With which operation sign must you replace the Δ so that the number sentence $4 \times 3 \Delta 6 + 2 = 15$ is correct?

A. $+$
B. $-$
C. $\times$
D. $+$

(1)

14. Ingrid stapel blokke volgens 'n patroon op mekaar. Gebruik dieselfde patroon om Stapel 5 te teken.

Stapel 1   Stapel 2   Stapel 3   Stapel 4   Stapel 5   (2)

From the typical examples, it is evident that learners lack basic understanding of important concepts regarding patterns.

Proposed interventions

- Learners should be taught to build number patterns from small numbers with different operations and then progress to large numbers. More exposure to number patterns to identify and complete the sequence is needed.
- More exercises must be taught and practised by learners on solving problems or sums that require completing number sentences.
- Learners should be able to *describe* the pattern, *identify* the rule and *predict* the next number in a sequence, e.g. teachers should begin a sequence of numbers and ask learners to say what the next number is and to give a reason.
- Learners should be taught how to generate their own patterns **practically** and explain the formation of the patterns they construct. One could begin by having learners identify a block or bead pattern and copy it. They should describe it and predict which object(s) will be placed next in the pattern.
- Learners should become familiar with patterns presented in table form and be able to complete such tables by using the identified rule, e.g. identify the pattern and complete the table.
- Learners need to develop the skill of translating words into number sentences which will assist them in how to tackle word problems.
- Learners need to develop the skill of translating words into number sentences which will assist them in how to tackle word problems.
- Regular high quality school-based assessment in line with ANA should be **practised**.

5.3.5 Space and shape

Beyond interacting with and handling concrete 3-dimensional objects to learn about their environment, learners also need to develop ability to conceptualise and/or visualise aspects of 3-D figures represented on flat surfaces. This is an important skill that needs to be developed quite early. The analysis showed that Grade 6 learners demonstrated noticeable deficiency in solving problems that required one to mentally visualise possible changes that could be effected on 3-D figures. The typical examples below illustrate some of the misconceptions that could be inferred from learners' responses:

17. How many lines of symmetry does the diagram below have?

(1)

18. Circle the letter of the net that cannot be folded into a cube.

A   B   C   D   (1)

From the above examples it is clear that learners who gave these kinds of responses either lacked understanding of the underlying concepts (e.g. symmetry, cube) or did not understand what the question required (i.e. problem of reading with comprehension). Each of these skills is important, viz. conceptual understanding and ability to read with comprehension.

Proposed interventions

- Practical activities using different shapes can be used to enhance spatial awareness in learners.
- Provide learners with many diagrams, in which they can identify shapes within shapes, e.g. where rectangles, squares, circles, triangles, stars and ovals are represented.
- It is recommended that teachers bring resources such as boxes and other containers for learners to work with.
- Regular high quality school-based assessment in line with ANA should be practised.
- Demonstrations should be performed for learners to be able to internalise viewing an object from different positions. Learners should then draw what they see.

5.3.6 Measurement

Measurement is a crucial scientific but cross-cutting skill that learners need to acquire and continuously perfect as they progress from grade to grade. At Grade 6 level learners should be able to identify and work with basic units of measurement that are appropriate for specific uses. The analysis showed that the majority of learners did not have sufficient conceptualisation of measurement, could neither identify appropriate units for a given quantity (e.g. appropriate units for volume) nor make reasonable estimates of the quantities (e.g. estimating the amount of liquid that could fill a kettle). A typical Grade 6 learner example has been given below:

1.5 How much water will a full kitchen kettle hold?

A   1,7 mℓ
B   1,7 ℓ
C   107 ℓ
D   1,7 kℓ

(1)

The response above suggests that either the learner could not make a scientific estimate of the possible volume of water that can be contained in a full kettle or did not understand the question.

The example below illustrates a serious misunderstanding of how different quantities are measured in different appropriate units which required different treatments. For example, units of length (distance) cannot be added to, or subtracted from, units of time.

12.	A car travels at 100 km per hour. How far will it travel in 45 minutes?

$$100 \text{ km}$$
$$- \ 60 \text{ min}$$
$$\overline{ 40 \text{ km per hour}}$$

It will travel 40 km per hour. (2) 0

Here is one more typical example:

19. On the grid below, each block represents 1 cm by 1 cm. ABCD is a rectangle.

19.1   The length of side AB = 4 ___ cm   (1)

19.2   The length of side AD = 6 ___ cm   (1)

19.3   How many square centimetres are in ABCD? 20 cm² (1)

These examples illustrate a number of misconceptions about basic concepts (distance, time, speed, area) that need to be addressed directly in the teaching and learning situation.

Proposed interventions

- Teachers are advised to spend more time on area and volume/capacity examples with learners and teach them conversions. More practical examples will enhance the learning process, e.g. using concrete objects and thus showing the relationship between the instruments and units.
- Teachers should lead learners to conduct conversions between different units of measurement coupled with doing basic operations.
- Learners should be encouraged to bring to class the containers that are used daily at home, so that the lessons become real and interesting.
- Homework on measurement should be given regularly and learners should be asked to measure containers that are used at home.
- Teachers should make use of square grids to teach area and perimeter.
- Teachers should hang conversion formulae on the classroom walls to keep reminding learners of how to do different calculations.

5.3.7 Data handling

Data handling is a process that requires specific skills and logical steps to make sensible statistical conclusions. For instance, statistics such as the '*mean*' can be calculated from ungrouped data whereas the determination of the median requires that the data be grouped first. The majority of Grade 6 learners were seriously lacking this kind of knowledge as has been illustrated in the example below:

From the typical response above, it is evident that the organisation of the data (grouping) to facilitate the required determination was either not known or ignored. The teaching and learning experiences to which learners are exposed need to highlight the importance of this important process skill.

5.3.8 Probability

'Probability' is one of the most misunderstood concepts by learners who are in Grade 6. Both the definition of what 'probability' means and the related calculations seemed very much misunderstood by most learners. For instance, most learners apparently could not differentiate between the concepts of 'probability' and 'ratio'. A few other misconceptions related to 'probability' can be inferred from the typical learner example responses below:

27. Study the picture below.

A bag contains black and white marbles. The probability of taking a white marble out of the bag above, without looking in the bag, is _____. (1)

27. Study the picture below.

A bag contains black and white marbles. The probability of taking a white marble out of the bag above, without looking in the bag, is _____. (1)

Proposed interventions

- It is a good idea to start by teaching learners to arrange numbers from the smallest to the biggest when ordering ungrouped data. Thereafter, differences among the various measures of central tendency, e.g. mean, mode and median, can be taught.
- Teachers should set practical and written problems on probability in different ways. One way would be to do practical activities on probability with beads, counters, etc., while asking questions related to probability. In this way, learners will be able to see the results themselves.
- Learners should be taught the language of probability. It should be related to fractions.

5.3.9 Solving money problems involving fractions

Application of different techniques in solving problems that relate to money-based transactions is a critical skill not only for learning mathematics in school, but more so in daily experiences of learners. Grade 6 learners demonstrated serious deficiencies in solving problems that require computations of proportional divisions (fractions and percentages) of given amounts. The typical example below illustrates some of the deficiencies in learner competencies regarding solving of money-related problems:

26. Mother bought the family a pizza for R120,00. She divided it amongst the family members as indicated below.
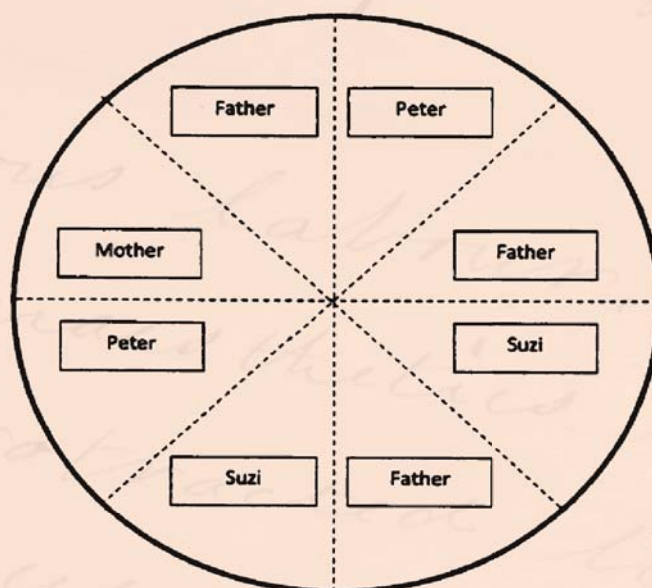
26.1	What fraction of the pizza did Father eat? $\frac{3}{8}$ ✓	(1) ✓
26.2	What percentage of the pizza did Peter eat? $\frac{2}{8}$ ✗	(1) ✗
26.3	What did Suzi's part of the pizza cost? R20,00 ✗	(1) ✗

From the typical example above, one can conclude that basic concepts, such as fractions and percentages and their computations, need focused practice in the daily experiences in the 'teaching/ learning' situation.

Proposed interventions

- Teaching of fractions must always be context based and be linked with financial Mathematics, where learners will be required to do some calculations to show the integration of the concepts and the real-life application thereof. The context must be relevant to the learners' daily experiences and, later, be extended in order to stretch their own thinking skills and capabilities.
- Mathematical formulae could be displayed on the walls so that learners always know what to do when a word 'sum' is phrased in a particular way.

5.4 GRADE 6 ENGLISH HOME LANGUAGE

In this section identified 'gaps' in specific skills, knowledge and competencies that were displayed by Grade 6 learners in Home Language have been presented.

Specific knowledge and skill 'gaps'

The following were some of the identified knowledge and skill 'gaps' or areas where Grade 6 learners demonstrated either lack of or inadequate understanding in Home Language:

5.4.1 Language structure

An integral component of learning formal aspects of Language is to know the structure and conventions used in a particular language. Unless learners are adequately equipped with the basic elements of a language, they will hardly ever be able to write confidently. Most of the learners in Grade 6 displayed acute lack of knowledge of basic elements of language structure in both Afrikaans and English. A typical example of the kinds of errors made in their responses has been given below:

13. **Use either a *prefix* or a *suffix* as instructed below.**

   13.1 Use a suitable *prefix* to form a word **opposite** in meaning to the word in brackets.

      It is (common) _____ "noun". for the housefly to stay outdoors. (1)

   13.2 Use a suitable *suffix* to form an **adverb** from the word in brackets.

      The housefly is (usual) _____ a carrier of diseases (1)

14. **Rewrite the following sentences into the *past tense*:**

   14.1 Frikkie likes to read books on houseflies because he finds them fascinating.

      frikkie readah read a book yesterday on houseflies because he find the fascinating (1)

   14.2 The flies in the kitchen are houseflies and they have green eyes.

      They flies in the kitchen are houseflies and they have green eyes. (1)

15. **Complete the following sentence using your own words:**

   When people kill a housefly, house they or cut and they will sell it. (1)

(The unclear word written by the learner is 'noun'.)

Proposed interventions

- It is suggested that classrooms should be equipped with teaching and learning aids such as charts and flash cards that demonstrate word structure. An A4 column chart with prefixes, stems, suffixes, as well as new words at the end can go a long way in teaching learners about different language formations.
- Learners should be given daily oral exercises – at least five words in which to include a prefix or suffix.
- The oral lessons should be followed by written exercises to contextualise the newly formed words.

5.4.2 Comprehension and language use

A predominant factor in the observed performance of learners in both Language and Mathematics is the inability to read with understanding. This includes the inability to grasp the words and the meanings that they carry in given texts as well as the inability for learners to construct own meaningful sentences. The choice of answer made by the learner in the typical response below shows absolute absence of reading with meaning on the part of the learners:

The need for learners to be exposed to regular reading of different types of text cannot be over-emphasised.

Proposed interventions

- It is suggested that teachers have definitions of all figures of speech displayed as charts on classroom walls so that learners know what each figure of speech means.
- Reading with understanding can be improved by regularly reading various texts. The more learners read, the better they become at comprehension.
- Literature lessons should not be the only time when figures of speech are taught. Learners should be encouraged to use these when they are writing different kinds of texts in the classroom.
- Listening to different media can stimulate the learners' comprehension skills as much as reading does. Language teachers should make use of the radio, television, tape/video recorders, etc., to sharpen the comprehension skills of learners.
- Learners should write at least one summary a week of any text that they have read in their spare time, and parents/guardians can be requested to assist in this regard.

5.4.3 Selection and recording

The following typical example illustrates the kinds of errors learners make when they do not read with comprehension:

Proposed interventions

- It is suggested that teachers should make sure that every learner has an English dictionary and knows how to use it effectively. This will not only increase the learners' vocabulary, but will sharpen their spelling skills as well.
- Literature lessons can be used to train learners to select relevant information and to record it. By constantly asking learners to use synonyms and giving them a chance to get these from their dictionaries, their vocabulary skills can be enhanced and they can then perform better in questions like the one above.
- Teachers are encouraged to make charts with commonly used phrases and their meanings.

5.5 GRADE 6 ENGLISH FIRST ADDITIONAL LANGUAGE

In this section identified 'gaps' in specific skills, knowledge and competencies that were displayed by Grade 6 learners in the First Additional Language have been presented.

Specific knowledge and skill 'gaps'

The following were some of the identified knowledge and skill 'gaps' or areas where Grade 6 learners demonstrated either lack of or inadequate understanding in the First Additional Language:

5.5.1 Knowledge of grammar

Most learners showed serious deficiencies in the knowledge of basic grammatical conventions of the English Language as can be seen from the typical example below:

Responses like the one shown above and many others can be rectified through daily exercises with language and regular reading of texts of different types.

5.5.2 Reading with comprehension

Most learners at the Grade 6 level could not provide meaningful written outputs when asked to do so as the typical example below illustrates:

> 9. Rewrite the sentences below in the negative form.
>
>   9.1 The pigs grunt loudly.
>   _going_   (1)
>
>   9.2 The young rooster flew up to the roof of the barn.
>   _rooster up morning_   (1)
>
> 10. Complete the sentences below using your own words.
>
>   10.1 If I was the young rooster, I …
>   _roof_
>   _rooster_   (1)
>
>   10.2 If the sun did not come up one morning, I …
>   _represent the time_
>   _according_   (1)
>
> 11. Complete the sentences below using your own words.
>
>   11.1 I have been going to school since …
>   _School deep_   (1)
>
>   11.2 During the weekend …
>   _Weekend green_   (1)
>
> 12. Change the sentence below into the past tense.
>
>   The sun comes up, but the clouds are covering it.
>   _Farmer_   (2)

(*In 10.1 the learner wrote 'roof' and 'rooster'. In 10.2 the learner wrote 'represent the time' and 'according'.*)

The question in the example above called for a high level of imaginative thinking as well as the ability to muster relevant language resources (including appropriate vocabulary). This is the level of literacy that every learner must be assisted to achieve through regular reading of different texts and listening to exemplary reading by others.

Proposed interventions

- Teachers should teach the language of assessment, e.g. learners should be trained in such a way that they know what is expected from them when questions contain words such as **rewrite**, **write in your own words**, **complete**, etc.
- At least 30 minutes per week should be utilised for explicit teaching of language structures and conventions.
- Practical teaching of the negative form should be done.
- Learners should be taught reading comprehension according to the CAPS document.
- Teachers can teach a variety of comprehension types that develop recall, reorganisation, inferential and evaluative thinking and reasoning skill.
- Teachers should plan comprehension activities that include one-word answers, rewriting in one's own words, multiple-choice questions, sequencing of events, etc.

5.5.3 Interpretation of graphs

While reading of text is important, information that learners must access is often presented in non-text formats. In the example below, information was presented in graphical form and learners needed to decode it.

7.3   Give a label for the information shown on the graph on the X-axis.
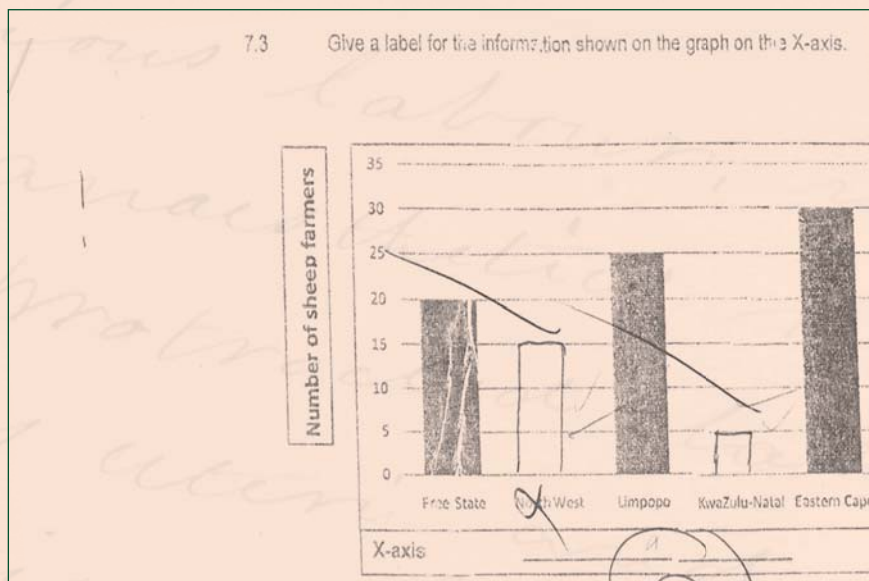
Performance of Grade 6 learners in exercises of the kind shown above was particularly low.

Proposed interventions

- Teachers should teach a variety of information texts according to the CAPS document.
- Integrate information texts from other subjects, such as Mathematics, EMS, Natural Sciences and Technology, i.e. graphs, maps, etc.
- It is very important to teach the writing of the summary of graphs (e.g. the heading – what the graph is about, what the Y–axis and X–axis represent)
- Learners should be trained to present information in graph form, i.e. they should make their own graphs regularly. In that way, their understanding of graphs could be strengthened.

5.6 GRADE 9 MATHEMATICS

In this section identified 'gaps' in specific skills, knowledge and competencies that were displayed by Grade 9 learners in the Mathematics have been presented.

Specific knowledge and skill 'gaps'

The following were some of the identified knowledge and skill 'gaps' or areas where Grade 9 learners demonstrated either lack of or inadequate understanding in Mathematics:

5.6.1 Number and relationships

The following were some of the key findings related to knowledge and skills in Number and Relationships:

5.6.1.1 Factorisation of binomials

Factorising binomials is one of the basic exercises that learners at Grade 9 level should be able to master with considerable ease. The factorisation of binomial expressions involves knowledge of basic laws of exponents, basic multiplication and addition skills. The majority of Grade 9 learners displayed acute lack of understanding of the basics in this important exercise as has been shown in the example below:

The kinds of errors made by learners in these examples show deficiencies in a basic principle of mathematics, viz. how to identify and treat unlike terms, which include exponents with the same base but different indices.

Proposed interventions

- Investing time in developing learners' conceptual understanding in Mathematics remains a critical determinant of effective teaching and learning.
- Terminology, such as 'factorise' and 'factorise fully' should be emphasised and clarified during teaching.
- Since Mathematics concepts are interlinked, laws of exponents should be taught effectively to provide learners with the requisite skills of factorisation of expressions.

5.6.1.2 CALCULATING compound AND simple interest

Calculation of Compound Interest (CI) and Simple Interest (SI) is a standard computation that often involves using a given formula and simply either directly substituting given values or beginning by re-arranging the formula and then substituting appropriate values. It is important that learners be able to distinguish, if not specified, between the two types of interest. A high percentage of Grade 9 learners were not able to perform the computation of either CI or SI.

In the following typical example of a learner response, the learner was informed that the amount owing accumulated interest. They were then supposed to calculate the amount at either CI or SI, whichever was relevant. This example shows the kinds of errors that learners make when they are not adequately prepared to answer questions that involve CI or SI:

Many learners who used the correct formula substituted time in months (24 months) instead of years and this resulted in an incorrect answer. It is important that each symbol in the formula for each of CI and SI be clearly interpreted for learners to understand.

Proposed interventions

- The correct use of formulae for calculating CI and SI are critical and should be taught effectively.

5.6.1.3 CALCULATING ratio

At Grade 9 level, learners are expected to be able either to formulate ratios from given quantities or compute quantities from given ratios. In the typical example below, learners were given the ratio and were required to compute a specific quantity, viz. the number of persons.

3.1 There are 240 children at a party. The ratio of the number of boys to the number of girls at the party is 3 : 1.
How many boys are there at the party?

$$240 - 31$$
$$= 209$$

The typical response shows absolute lack of understanding of the basic concept of ratio followed by a meaningless operation because eventually unlike terms were treated as if they were like terms.

Proposed interventions

- At Grade 9 level, the conceptual understanding and symbolic representation of ratio should form part of the basic knowledge learners are expected to have.
- Learners should be given varied applications involving the calculations of ratio. Equivalent forms of ratio should be included in these applications.

5.6.1.4 Solving equations

Solving problems that involve mathematical equations is an integral part of learning mathematics. At Grade 9 level, there are a few standard mathematical equations that learners need to be familiar with.

The equations require standard procedures to solve, e.g. identifying factors (if any) and ensuring that the two sides of the equation are kept balanced at every step of the calculation. Some of the kinds of errors that Grade 9 learners make in solving mathematical equations have been illustrated in the example below:

2.5.2 $x^2 - 2x = 0$

2.5.2 $x^2 - 2x = 0$

Some of the specific deficiencies that learners demonstrated in the above examples include the following:

(a) Inability to factorise, including inability to identify a common factor in a given expression

(b) Dividing a number by an unknown number which might turn out to be a zero and division by zero is known to result in an undefined quantity.

The above are some of the basic principles that every learner must be trained to always be on the look out for when solving mathematical equations.

Proposed interventions

- The steps involved in solving quadratic equations should be emphasised. For example, learners should first write the equation in standard form, then check for a common factor, factorise fully and apply a zero product rule, i.e. if $ab = 0$, then either $a = 0$ or $b = 0$.
- Learners should always be encouraged to check their solutions by substitution.
- Teachers should be assisted with effective methods of teaching equations.
- Teachers should introduce linear equations using simple examples where learners can find the solution by inspection.
- Simple examples should be used to demonstrate the steps of solving equations using appropriate methods.

5.6.2 Patterns, functions and algebra

The following findings were related to patterns, functions and algebra in Mathematics.

5.6.2.1 Algebraic patterns

The ability to identify (number) patterns is an important skill in mathematics. At Grade 9 level, learners are expected not only to identify number patterns, but also to conceptualise general rules for different number patterns. They are also expected to use specific terminology linked to specific concepts, e.g. they must be able to distinguish between a 'term' in a number pattern or sequence and 'the number of the term' in the sequence. For instance, in the sequence: 1; 2; 3; _____; _____, 3 is a "term" which is "term number 3" in the sequence. Although the same numeral (3) is used, it has been used to communicate two different meanings.

Most Grade 9 learners could not demonstrate clear understanding of the concepts and procedures involved in identifying and working with number patterns.
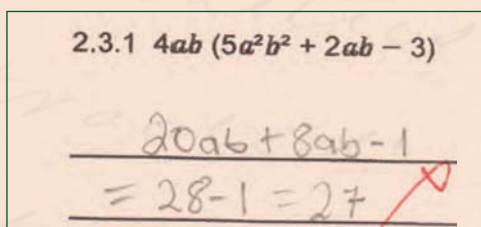
Proposed interventions

- The teaching of number patterns can be done effectively when integrated with geometric patterns. An example of such integration is shown below.
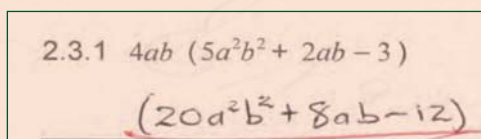
5.6.2.2 Expanding and simplifying linear and quadratic expressions

Quadratic expressions (and equations) constitute an important component of Grade 9 Mathematics work. These are expressions (equations) where the highest index on the unknown variable (placeholder) is 2.

There are specific standard procedures to manipulate quadratic expressions (equations) and these need to be practised regularly by learners as 'tools' that they shall use in solving complex problems.

> 2.3.1 $4ab\,(5a^2b^2 + 2ab - 3)$
>
> $$\underline{20ab + 8ab - 1}$$
> $$= 28 - 1 = 27$$

Below are two typical examples of learner responses that demonstrate some of the common errors:

> 2.3.1 $4ab\,(5a^2b^2 + 2ab - 3)$
>
> $$(20a^2b^2 + 8ab - 12)$$

Interrogating each of the examples above will help the teacher identify areas where specific attention is required in teaching similar expressions.

Proposed interventions

- Simplifying expressions of this nature requires the use of other skills and the application of conceptual knowledge that rests with the other content/topics.
- These skills and concepts include the laws of exponents, multiplication, addition, subtraction and distributive property.
- During teaching, learners should be made aware that the skills and concepts are interwoven and should not be viewed as isolated.

5.6.3 Space and shape (Geometry)

Some of the key findings related to space and shape have been summarised in this section.

5.6.3.1 Parallel and perpendicular lines

Knowledge of features that characterise parallel and perpendicular lines in geometrical figures is fundamental to making sense of other relationships among the figures or parts thereof. For instance, parallel lines are defined in terms of equal corresponding angles and perpendicular lines are characterised by right angles at their points of intersection. These and many other important geometrical relationships need to be part of regular practice by learners.

The majority of Grade 9 learners showed very limited knowledge and understanding of these fundamental geometrical concepts.

5.6.3.2 Calculation of surface area

Grade 9 learners must be able to distinguish between volume and surface area and use appropriate formulae. The majority of the learners tended to confuse the two concepts.

5.6.3.3 Points of intersection and transformations

The key concepts that were assessed on this topic included ability to do calculations based on simultaneous equations, determining coordinates of intersecting lines, solving linear equations and identifying transformations (translations and reflections) of given geometrical figures. There was general misunderstanding and inability among Grade 9 learners to perform basic calculations based on these important geometrical concepts.

Proposed interventions

- Teachers should be given enough support in the form of regular workshops on different strategies that should be used to teach shapes, lines and angles, as well as the application of congruency.
- Teachers should provide learners with concrete materials and diagrams, where learners can identify the lines that form a shape. The lines could be drawn in different colours. The relationship between the lines should be clearly explained.
- Learners should be encouraged to draw their own shapes and state the relationship of the lines.
- Methods and rules should be clearly explained in simple language. More emphasis must be placed on geometry. Practical examples must be used to teach geometry and each example must be accompanied by pictures.
- As a way to build their conceptual understanding of surface area, learners can be taught to start by creating a net of a rectangular prism and then calculate the surface area of each face.
- There must be an improvement on the learners' knowledge and understanding of two critical concepts accounted for in the poor performance on the transformation and translation of points: *firstly* the concept of 'coordinates' and *secondly* 'transformation with reference to translation and reflection'.

5.6.4 Measurement

The specific aspects and concepts related to measurement in which Grade 9 learners were assessed included calculation of ratios of perimeters in transformed geometrical figures as well as calculation of areas of similar triangles and the ratios thereof.

Learners displayed serious inadequacies in understanding the concepts underlying these operations. Typical examples of some of the responses that learners gave have been shown below. Most of the calculations could not be linked to any particular formula or conceptual framework. Urgent attention needs to be paid to teaching learners basic concepts in geometry.

> 7.3 The length of each side of figure P is halved. Calculate the perimeter of the new figure.
>
> $1\frac{1}{3} + 1 = 11$
>
> (2)
>
> 7.4 Determine the ratio of the area of figure P to the area of the reduced figure in question 7.3.
>
> $1;1$
>
> (2)

Proposed interventions

- Teachers should be assisted with appropriate methods of teaching straight line geometry.
- Simple and appropriate mathematical language should be used regularly for teaching and learning.
- Grids could be used to demonstrate the concepts of area and perimeter.
- A simple Mathematics 'dictionary' of commonly used terms can be made by the teacher on charts and put up on the classroom wall.

5.7 GRADE 9 ENGLISH HOME LANGUAGE

In this section identified 'gaps' in specific skills, knowledge and competencies that were displayed by Grade 9 learners in the Home Language have been presented.

Specific knowledge and skill 'gaps'

The following were some of the identified knowledge and skill 'gaps' or areas where Grade 9 learners demonstrated either lack of or inadequate understanding in the Home Language:

5.7.1 Language use

Many of the responses that Grade 9 learners gave in instances where they were asked to provide written outputs based on what they had read in the given passages showed that the learners lacked basic skills in language use. The typical example below illustrates some of the outputs from the learners:

> 9. 'It took a turn up ... and then got out of hand ...' (paragraph 2).
>   Replace the underlined phrase with a phrase of the same meaning.
>
> Tche a wrong tane
>
> (1)

(*The learner wrote 'Take a wrong tane'.*)

Grade 9 learners generally demonstrated very limited language skills. They could not read simple texts with evidence of clear comprehension.

Proposed interventions

- Learners should be exposed to a wide variety of reading material. Teachers can find publications that contain lists of idioms and commonly used phrases.
- Listening to scholarly debates on the radio or on television could also expose learners to how the different expressions are used.
- Literature lessons should also be used as platforms of widening learners' knowledge of phrases and idioms.
- Teachers can make charts of commonly used phrases and idioms and hang these up on the classroom walls.
- Regular homework on idioms should be given and learners must be encouraged to use these when they write creative texts.

5.7.1.1 Summarising text

Ability to accurately summarise text after reading is an indicator of reading with understanding. Most Grade 9 learners could neither identify main ideas nor describe key characters after reading a simple text.

Proposed interventions

- Teachers should give learners regular exercises that require them to find the main idea.
- Learners must be trained on how to read a text critically (for both comprehension and information).
- Learners also need to be equipped with skills of inference for them to be able to understand things that are implied and not necessarily written in the text.
- Literature lessons can be used to sharpen the skill of summarising. Learners can be asked regularly to find the main idea of stories, poems, essays, etc. as they read them in class.

5.8 GRADE 9 ENGLISH FIRST ADDITIONAL LANGUAGE

In this section identified 'gaps' in specific skills, knowledge and competencies that were displayed by Grade 9 learners in the First Additional Language have been presented.

Specific knowledge and skill 'gaps'

The following were some of the identified knowledge and skill 'gaps' or areas where Grade 9 learners demonstrated either lack of, or inadequate, understanding in the First Additional Language:

5.8.1 Language structure

Like their counterparts who took the test at the Home Language level, Grade 9 learners who were tested at the First Additional Language level displayed serious limitations in understanding and using basic language structures. A typical response on the following page illustrates the point:

> **Complete the underlined sentence using the correct form of the verb in brackets (past perfect progressive tense).**
>
> Ranger: Did you manage to spot any cobra in the veld?
> Tour guide: Oh, yes! <u>By the time we spotted a cobra, we (search) for over an hour.</u>
>
> By the time we spotted a cobra, we _search for at an hour_
>
> _____ (2)

Proposed interventions

- Teachers should teach the language of assessment, e.g. learners should be trained in such a way that they know what is expected from them when questions contain words such as **rewrite**, **write in your own words**, **complete**, etc.
- At least 30 minutes per week should be utilised for explicit teaching of language structures and conventions according to the CAPS document.
- Practical teaching of the verb tenses should be done.

5.8.2 Reading with comprehension

Assessments included asking learners to read an appropriate text and then answer questions that show that they read with understanding. Most of the responses showed that the learners could not interact sensibly with text. They also could not read with understanding.

Proposed interventions

- It is suggested that teachers should teach comprehension strategies as prescribed by the CAPS document. Reading with understanding can be improved by regular reading of various texts. The more learners read, the better they become at comprehension.
- Literature lessons should be used generously to teach language in context.
- Listening to different media can stimulate learners' comprehension skills as much as reading does. Language teachers should make use of the radio, television, tape/video recorders, etc. to sharpen the comprehension skills of learners.
- Charts of commonly used phrases and idioms can be put up on the classroom walls, so that learners can use them daily, and new ones should be added regularly.

6. CONCLUSION

The key findings and proposed interventions contained in this report are solely aimed at the teacher and the day-to-day management of the curriculum in the classroom. The question samples were selected strategically in order to give insight into how learners in Grade 3, 6 and 9 performed in Language and Mathematics and also provide possible ways in which learners could be assisted to learn more effectively.

The qualitative analysis suggests that most learners have not mastered knowledge and skills that are appropriate to the grade in which they are placed. Therefore, there is need for teachers to develop remedial programmes that address the shortcomings in learners' skills and knowledge.

The recommended interventions in this report should be incorporated into teaching plans and augmented with relevant strategies in each context. The recommendations are not exhaustive but they provide the minimum that could be done to address the challenges and help learners improve performance at school and in national assessments.

One important feature of this report is that it provides specific evidence to illustrate the nature and extent of the identified learning shortcomings among learners in each grade. Teachers are expected to develop targeted programmes to address specific weaknesses relevant to their own learners. Principals must provide necessary support and materials. Districts should also find the report useful to guide their monitoring and support to schools. The DBE, together with the PEDs, will monitor the implementation of remedial prosgrammes and provide support and appropriate resources where necessary.

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