



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

THE MINISTERIAL TASK TEAM

REPORT ON THE

NATIONAL SENIOR CERTIFICATE

(NSC)

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EXECUTIVE SUMMARY

The Ministerial Committee on the National Senior Certificate (NSC) had the following brief:

Ministerial Task Team: Terms of Reference

The terms of reference of the Ministerial Committee will be as follows:

- (a) To establish from current research and other media reports the main criticisms addressed against the National Senior Certificate (NSC);
- (b) To conduct a comparative study of the promotion requirements of the NSC and other similar exit qualifications in a few countries that are of international repute;
- (c) To consult with the key recipients of the NSC in the South African academic, workplace and business environment and identify their concerns about the NSC and how these can be rectified in the short to medium term;
- (d) To evaluate the currency of Mathematics and Mathematical Literacy and whether this is the best option for the South African schooling system in terms of preparing learners for the workplace, higher education studies and personal citizenry;
- (e) To ascertain whether Mathematical Literacy should not rather be separated from Mathematics;
- (f) To investigate the possibility of introducing another level of Mathematics, namely Technical Mathematics, which is related to the technology subjects as proposed by the Principals of Technical Schools;
- (g) To evaluate the 'value add' of Life Orientation (LO) as a subject that is designed to inculcate morals, values, physical education and career guidance to learners and to determine whether Life Orientation should not be a non-examinable subject;
- (h) To compare the interim National Curriculum Statement Grades R – 10 to be phased out in December 2013 and the new National Curriculum Statement Grades R -12 to be phased-in in January 2014;
- (i) To arrange public hearings on the findings and preliminary report of the Ministerial Committee; and
- (j) To make recommendations on the key concerns relating to the NSC, and the implications of these recommendations if implemented.

After consultation with Department of Basic Education (DBE) in August 2013, it was agreed that the Task Team focus on the following:

- (a) The “standard” of the NSC. This involved considering its:
 - (i) quality, credibility and fitness for purpose;
 - (ii) promotion requirements;
 - (iii) standing in relation to international examples;
 - (iv) articulation with other areas of our national system; and
 - (v) the career pathways it opens up, along with other factors negatively affecting the standard.
- (b) Mathematics, Mathematics Literacy and Life Orientation
- (c) Comparison of old and new curriculum statements
- (d) The quality of School-Based Assessment
- (e) Other related matters.

All of these elements received attention. Some required in-depth treatment as chapters in their own right. Others were dealt with in the course of wider-ranging analysis. In preparation for the task, the committee issued a public invitation for written and oral submissions. There was a substantial response from professional organisations, education departments, Umalusi and the general public. This shows that the NSC is the focus of wide concern. Unfortunately, business did not respond as substantially.

The written submissions were carefully analysed, and the oral submissions, conducted interactively, were recorded and then analysed with equal care. In addition, a considerable amount of research was done by members of the committee to establish the nuances of current national and provincial policy with a bearing on education, and to make use of past reports on the NSC and reports from education departments, Umalusi and the DBE. These covered issues relating to management and standards in the NSC and to school improvement.

The recommendations which follow, then, are the product of much careful, evidence-based discussion, informed both by a knowledge of the dynamics of the education system and by a sense of what education means, particularly to the social and economic future of our country.

Clearly, the Ministerial Task Team's brief was not restricted to technical matters. While its approach was defined by a focus on the NSC, its recommendations had to take account of more than the way the NSC is run and the adequacy of current requirements for passing and excelling. To meet its brief it had to give careful attention to such matters as:

- (a) The implications of the NSC for the whole FET phase.
- (b) The current situation in the schooling system and efforts to improve the standards of learning and teaching as the primary means of raising standards.
- (c) The suitability of the NSC as the main exit qualification from secondary schooling, and the possibility of other pathways and qualifications.
- (d) The public image of the NSC, its credibility, and its impact on school achievement and work opportunities.
- (e) The challenges relating to the Language of Learning and Teaching (LOLT).

SOME OVERALL CONCLUSIONS

- (a) There are widespread public and professional concerns about the standard and quality of the NSC as a qualification.
- (b) The standard and quality of the NSC is improving, but requires committed on-going attention to satisfy internal and international criteria.
- (c) The NSC is not adequate in its current format for all the purposes it is being made to serve, and there is an urgent need for an appropriate vocational track.
- (d) Although the examinations process has improved over the past few years there are still serious concerns about the quality of several aspects of the process.
- (e) While structural and policy matters are very important, well-trained, fully professional teachers are ultimately the key to the development of a vibrant 21st century education system.

RECOMMENDATIONS

To improve the efficiency and effectiveness of the system as a whole, the NSC must provide a more accurate assessment of learner capabilities, and direct learners to the most appropriate post-school opportunities in further education, tertiary education or the labour market. This requires attention to quality and credibility issues as well as to structural changes.

1. PROMOTION REQUIREMENTS AND FACTORS IN PROMOTION

A more detailed differentiation between the levels of NSC passes is recommended, along with exploration of a vocational pathway.

The review of requirements includes the removal of Life Orientation (LO) from the NSC curriculum, raising the requirements for passing the Language of Learning and Teaching (LOLT) from Higher Certificate onwards, and removing the provision for failing one subject from Diploma and Bachelor's passes. The revised requirements and attention to underlying quality issues will make the NSC a better predictor of success in the workplace and in Further and Higher Education, and will be more conducive to preparing learners adequately for the demands of the 21st Century.

The detailed recommendations below concern both structural and substantial support for such desirable outcomes:

- 1.1 **Remove Life Orientation from the NSC examination**, and redistribute the Grade 12 Life Orientation curriculum to Grades 10 and 11, with the exception of *Recreation and physical wellbeing* and *Career planning*. This reduces the number of examinable subjects studied for the NSC from seven to six. (See chapters 1 and 4).
- 1.2 **Raise the overall minimum pass requirements for each level of pass above the basic NSC, and establish a differentiated set of exit points from the NSC with clear access routes to the post secondary sectors.** (See chapters 1 and 5). These recommendations are based on there being six examinable subjects for the NSC after the removal of LO.

1.2.1 New minimum requirements for basic NSC

- (a) Pass 3 subjects at 40% including an official language at Home Language level;
- (b) Pass 2 subjects at 30%; and
- (c) May fail the 6th subject, provided examination requirements have been met, and there is full evidence of the SBA in that subject having been completed.

1.2.2 Raise minimum pass requirements for entry to higher certificate study

- (a) Pass 3 subjects at 40 % including LOLT;
- (b) Pass at least 2 further subjects at 35%; and
- (c) May fail the 6th subject, provided examination requirements have been met, and there is full evidence of the SBA in that subject having been completed.

1.2.3 Raise minimum pass requirements for entry to diploma study

- (a) Pass LOLT at 50%;
- (b) Pass 4 further subjects at 40%; and
- (c) Pass 1 further subject at 35%.

1.2.4 Raise minimum pass requirements for entry to degree study

- (a) Pass 4 subjects at 50%, including LOLT;
- (b) Pass 2 subjects at 40%. (If home language is not LOLT, it must be passed at 40 %.)

1.3 Raise cognitive demands in examining LOLT

The allocation of weightings for the level of cognitive challenge must change. The current requirements for Grade 12 LOLT provide for 40% of the assessment to be at the lowest level (Level 1) of cognitive challenge.

It is recommended that a maximum of 15% should be at Level 1 and that in combination Levels 1 and 2 should not exceed 30%. (See chapters 1 and 3).

1.4 Improve the credibility of School Based Assessment

Currently, the quality and standard of SBA as an element in the NSC final mark is not sufficiently controlled for it to have credibility. However, there are valid concerns that dependence on a single appraisal in a public examination is unsatisfactory.

We recommend that the implementation and moderation of SBA be thoroughly and regularly addressed during teacher development and training, and that the statistical moderation process of Umalusi be strengthened with the inclusion of additional criteria for determining the reliability of the SBA. (See chapters 6 and 7).

1.5 Explore broadening the general qualification to include a vocational pathway

Despite the changes proposed above, there is insufficient differentiation in the system to meet the needs of all students. (See chapter 5). While structured differentiation could come to reflect the inequalities in our society, the absence of such pathways has not prevented this outcome in practice.

It is proposed that a vocational pathway be explored from grades 10 to 12. Immediate steps in this direction are:

1.5.1 Introduce the NCV in technical high schools;

1.5.2 Introduce a Grade 9 exit certificate;

1.5.3 Research the pathways available after Grade 9 in a changing post-school environment;

1.5.4 Bring Recognition of Prior Learning into the mainstream of educational pathways;

1.6 Improve all aspects of quality to give substance to the new structures

Realigning the pass requirements for the NSC has to be supported by a systematic focus on quality improvement in all aspects, including assessment, classroom practice, teacher knowledge, adequate resourcing and infrastructure, leadership and school improvement.

2. MATHEMATICS AND MATHEMATICAL LITERACY

In the light of on-going and well-documented concerns about the adequate preparation of South African learners in Mathematics, and recurrent complaints about the adequacy of Mathematical Literacy, we recommend that:

- 2.1 **CAPS be implemented for the next eight to ten years without any further curriculum policy changes** so that national and provincial departments of education can concentrate their resources and energies on improving all aspects of implementation. *This recommendation is key to improvement.*
- 2.2 **The Mathematical Literacy curriculum be retained as reformed in CAPS, but the curriculum policy intentions and the enhancements in implementation be significantly strengthened**, especially as these relate to the quality of teaching, assessment and examinations.
- 2.3 **A national information awareness campaign about the value, place and role of Mathematics and Mathematical Literacy as distinct subjects in the NSC be launched both in schools and in the communities that they serve.**
- 2.4 **As a matter of national policy, learners be required to take Mathematics with (selected) Science subjects and also when taking a combination of Economics and Accounting.**
- 2.5 **All schools be required to offer Mathematics and be enabled and adequately resourced to do so.**
- 2.6 **The demand for differentiation in the Mathematics curriculum be addressed in terms of changes in the examination and assessment of the subject.**

We recommend that:

- (a) The Mathematics curriculum be examined through three papers, which divide the subject into different topic/content combinations and sets of desired learning outcomes, linked to different career and study pathways.
- (b) Each learner to receive the results of each paper as well as the overall Mathematics result.

- 2.7 **An alternative vocational/technical pathway (directly and sharply articulated with FET Colleges) be developed in the FET Grade 10–12 band offering a different vocational/technical Mathematics closely aligned with vocational, artisanal and technical programmes and work contexts.** The new 'Technical Mathematics', referenced against the Mathematics CAPS curriculum, should not be introduced across all schools, both as it will regress the education system (as did Standard Grade Mathematics in the old Senior Certificate), and as it is unlikely to improve Mathematics learning outcomes in real and relevant terms.
- 2.8 **All teachers of Mathematics should have adequate knowledge and skills to teach the subject well and deliver on CAPS.**
- 2.9 **Teacher development opportunities be made available on an appropriate scale and be linked with teacher testing and placement.**

3. LANGUAGE OF LEARNING AND TEACHING (LOLT)

Multilingual environments make complex demands. The significant and extensive problems across the curriculum as a result of many learners' proficiency levels in LOLT being too low to cope with the demands of the curriculum and the NSC examination, have to be seen in that context. They make it necessary to pay special attention to teaching and examining the LOLT.

We recommend that:

- 3.1 **The pass requirements for Language of Learning and Teaching (LOLT) be raised** for all but the basic NSC as outlined in 1.2 above:

- (a) Higher certificate entry: 40%
- (b) Diploma entry: 50%
- (c) Degree entry: 50%

- 3.2 **Recognition be given to the unique position of English First Additional Language (EFAL) as the course supporting LOLT for 80% of learners.**

The standard of the EFAL papers can then be raised in line with what is needed for effective implementation of the LOLT and to equip learners adequately to meet the language competence demands across the curriculum and post school. This implies,

among other things, following the recommendations of the international agencies used for benchmarking:

- (a) Longer texts for comprehension; and
- (b) Raising the kinds and level of comprehension tested, significantly reducing the recall and retrieval items and including more application and inferential questions. (See 1.3 above)

3.3 The effectiveness of national and provincial strategies related to EFAL be evaluated, and, where the strategies are effective, that they be expanded.

In particular, the following need concentrated attention:

- (a) Giving increased and sustained support to EFAL in the classroom, beyond the Grade 12 “Band Aid” strategies. In particular, significant interventions are required to empower teachers by enhancing their proficiency in English where the LOLT is English and teachers are non-native English speakers.
- (b) Prioritising the communication skills of pre-service teachers in teacher education, especially where they are non-native English speakers, both so that they are able to provide quality instruction through the medium of English as LOLT, and to raise awareness of the importance of doing so.

3.4 Examination practices in LOLT need to be significantly improved. In particular:

3.4.1 Requirements for the selection of NSC markers must be raised, they must be selected on merit, and they must be given excellent on-site training.

3.4.2 The rubrics for marking open-ended questions must be revised, both because the current rubrics have been shown to be inadequate, and because it is precisely in this area of more sophisticated writing that marking is most demanding.

3.4.3 External, international evaluation of papers must be used more effectively. As a rich source of critique and engaged feedback, reports should be:

- (a) Shared with external moderators as a source of reflection and to strengthen their ability to make appropriate demands.
- (b) Shared with examination panels.
- (c) Used to inform professional development.

4 LIFE ORIENTATION

Life Orientation has been highly contentious, as it has a very high pass rate and is almost entirely internally assessed by schools. On the other hand it covers a number of themes of major importance to learner development.

To address both of these concerns, we recommend that:

- 4.1 Life Orientation be removed from the promotion requirements for the NSC.**
- 4.2 The Grade 12 Life Orientation curriculum be reduced, retaining only sections related to physical education and career counselling, without either of these topics being assessed.**
- 4.3 A formal summative assessment on Life Orientation be introduced at the end of Grade 11 that serves as a pre-requisite for entrance into Grade 12.**
- 4.4 Life Orientation be retained in the FET up to the end of Grade 11, with the Grade 12 sections on personal well-being and citizenship education being integrated into the Grade 10 and 11 curricula.**
- 4.5 Formal assessment of LO at the end of Grade 11 focus on citizenship education.**
- 4.6 Teachers with the necessary training and qualifications in Life Orientation associated topics be deployed to schools. There is a particular need for trained teachers in physical education and career counselling and in general for professional development in these areas.**

5. DIFFERENT EDUCATIONAL PATHWAYS

A critical element in an education system to enable South Africa to develop its talent pool more effectively is differentiation within the system of qualifications. The Ministerial Committee believes that the NSC is being expected to meet far too broad a spectrum of needs, while it is conceived in terms that make meeting those needs excessively difficult to achieve. Much more research and thinking is necessary before more ambitious proposals can be made, but it is already possible to recommend that:

- 5.1 South Africa should communicate a clear and unambiguous vision of its economic future and how it can be reached, and that the education system be shaped by that vision.**
- 5.2 A shared educational lens aligned to the NDP be co-created by interested parties and global partners, so that a coherent message, backed by consistent leadership, can inform the nation about our current levels of competence, our educational needs and our knowledge aspirations.**
- 5.3 Regular cohort studies be undertaken to understand factors impacting on the pathways and destinations of learners in a changing environment.**
- 5.4 A revised/reformed NCV be implemented in technical high schools, and DBE and Department of Higher Education and Training (DHET) jointly investigate pathways to connect general education and vocational education across the system.**
- 5.5 An exit certificate for Grade 9 be introduced.**
- 5.6 The pathways available after Grade 9 in a changing post-school environment be researched.**
- 5.7 In line with the thinking of the White Paper, RPL should be brought into all the main education pathways to enable all South Africans to have access to opportunities to improve their levels of competence, to access learning opportunities, and so to contribute to building a 21st century learning culture.**

6. SCHOOL-BASED ASSESSMENT

School-Based Assessment (SBA) across all examinable subjects in the NSC has been particularly problematic because the raw scores coming from some schools correlate so poorly with examination performance and patterns vary markedly from school to school. It has been noted that SBA can inflate results or lead to unfairness.

On the other hand the dangers of high-risk assessment providing a distorted picture, and the potential importance of school-based, teacher driven assessment and feedback in the classroom argue for its value, both as a significant factor in fair assessment and as a tool for educational improvement.

We recommend that:

6.1 SBA and its 25% weighting in the final mark be retained on condition that Umalusi's standardising role and capacity to make adjustments is sustained and developed.

6.2 DBE build on and enhance its efforts to strengthen SBA. The whole value chain involved in implementing SBA needs to be strengthened by:

6.2.1 Stepping up the accountabilities of the various implementers and managers. Principals and heads of subjects in schools must be held more accountable for the validity and reliability of SBA.

6.2.2 Increasing the resourcing of the SBA system, particularly providing an adequate number of well-equipped subject advisors, and

6.2.3 Further standardising the SBA processes. Part of each of the assessment frameworks should be standardised nationally or provincially to increase validity. The actual design of tasks should still be left to the individual teachers.

6.3 More action-oriented research and evaluation studies be conducted in schools where SBA marks are inflated, both to ascertain the reasons for this and where necessary to provide a basis for interventions to eradicate the practice of inflating marks. This process should continue until standards are met.

7. STANDARD AND QUALITY OF THE NSC EXAMINATION

7.1 Examination related processes

We recommend that:

7.1.1 **An overall examination plan** be available, providing for an 18 month cycle in the examinations process.

7.1.2 **Content definition** be given serious attention, and specifically that all guidelines regarding curriculum content be clarified with internal and external moderators, and that, where content-related problems exist are identified, the rubrics that are used be reviewed and adapted appropriately

7.1.3 Every examination paper have **an examination specification framework** and that this be sent to the external moderators and external evaluators when the paper is submitted to them

7.1.4 Item development for examination papers

We recommend that:

- (a) The time scales for the development of the items and papers be revisited to establish a more realistic timeframe, and that the development process be aided by the use of a test specifications framework/grid.
- (b) Stricter implementation of the quality criteria for being a moderator be enforced, and that intensive training and up to date techniques related to item development and test construction be shared with both internal and external moderators.
- (c) Benchmark reports that clearly highlight serious flaws in the papers be shared with the internal and external moderators and be seen as part of the professional development and quality enhancement processes.
- (d) The number of items that have low mark allocations be reduced and the number of items requiring higher cognitive thinking be increased.

7.2 Test Design and Assembly

We recommend that:

More attention be given to the overall design of each paper, including the use of a test specification grid, and that consideration be given to the pre-testing of items as well as to a move to item banking to improve the quality of the items and the papers overall.

7.3 Test production

We recommend that:

7.3.1 There be a significant improvement in the Afrikaans translations of all the papers.

7.3.2 The quality assurance of the printed papers be improved as poor quality presentation threatens the validity of the examinations.

7.4 Test Administration

We recommend that:

7.4.1 Given the concerns about irregularities, examination centres be encouraged to report irregularities (See 7.7.2).

7.4.2 In some papers where there are extensive additional sources and there is a greater reading demand (e.g.; Economics, Geography and History amongst others), a mandatory reading time be introduced at the beginning of the examination prior to candidates attempting to answer the papers. This would improve the validity of the process.

7.5 Scoring Test Responses

Due to the significant problems with marking and the impact this has on the validity and reliability of the results, marking needs a multifaceted, urgent and substantial intervention.

We recommend that:

7.5.1 Quality be the most important criterion for appointing markers. Qualifications and experience are critical to ensure the validity of examinations, so markers at all levels of seniority must have the required qualifications and experience.

7.5.2 Potential markers be required to demonstrate their competence prior to their being appointed.

7.5.3 Non-education related criteria, such as those tainted by tribalism or political sectionalism, be eradicated from the system of appointing markers. Markers found providing false information about their experience and qualifications must be prosecuted and referees found to have supplied false information should be held accountable.

7.5.4 On-site training during marking be suitable for well-qualified and experienced markers, and so of a high quality and specific to the examination papers. Marking of NSC examination scripts should not be viewed as a basic training opportunity, but could be regarded as enhanced professional training.

7.5.5 Markers who fail to meet the required standards for marking papers be barred from continuing to mark, and if they have marked some papers, those be remarked in full.

7.5.6 Marking representatives from all provinces be compelled to attend all related and appropriate memo discussions. No changes to the memos should be allowed outside of the specified policies without approval.

7.6 Passing scores

While there are no passing scores in the traditional sense of test development, we recommend that:

7.6.1 The vital issue of comparability of standards across papers (such as between languages at certain levels) should be addressed.

7.6.2 Uniform rubrics and test specifications frameworks to establish common standards across languages for home language, first additional language and second additional language papers be implemented as soon as possible.

7.7 Reporting examination results

There is some concern in the quality assurance sector that there is a decline in reporting of irregularities. There is a related concern that some provinces do not encourage reporting.

We recommend that:

7.7.1 This concern be investigated to test its validity, as, if valid, it would require urgent attention.

7.7.2 In general, provinces and examination centres be encouraged to accept accountability for irregularities and be required to report them. This requires both that the consequences be in proportion to the irregularity being reported, and that firm action be taken in cases where irregularities are found and no official irregularity report has been submitted.

7.8 Item banking

We recommend that the department consider establishing an item bank, initially compiling items for one or two subjects to explore its effectiveness and impact in the South African NSC context. This would allow the use of appropriate scientific methods to investigate quality and standards thoroughly on an on-going basis.

7.9 Examination technical report

We recommend that, as good practice, DBE produce an examination technical report which contains systematic, thorough, detailed documentation of validity evidence as well as a number of recommendations.

7.10 International benchmarking

We recommend that external, international evaluation of papers be used more effectively, and that, as a rich source of critique and engaged feedback, reports be:

- (a) Shared with external moderators as a source of reflection and to strengthen their ability to make appropriate demands.
- (b) Shared with examination panels.
- (c) Used to inform professional development.

7.11 Standardisation

We recommend that the status quo remain, although the time allocated to the standardisation processes must be increased so that the results can be effectively standardised. This will be particularly necessary in 2014 as examinations will be based on the new curriculum and the previous norms used for standardisation will no longer be appropriate. The process is likely to require more time for checking and reviewing the data.

8. HOME LANGUAGES AND THE STANDARD OF AFRICAN LANGUAGES

We recommend:

- (a) A thorough investigation into the standard and the nature of the assessment of the African languages at HL level.**
- (b) An open discussion about the examination of African language papers from an assessment perspective.**
- (c) Urgent attention to the issue of Grade 12 having adequate academic and literary resources for African languages and to the selection, dissemination and use of these resources.**

CHAPTER 1

PROMOTION REQUIREMENTS IN THE NATIONAL SENIOR CERTIFICATE EXAMINATION

INTRODUCTION

Part of the brief of the Ministerial Task Team was to address promotion requirements and other related matters that impact on the standard of the NSC. This chapter reviews promotion requirements as they pertain to the different exit points in the National Senior certificate.

1. THE SOUTH AFRICAN CONTEXT

With the 2015 target date imminent for meeting Education for All goals, education quality and reform remain key South African development challenges. Education for All has been a consistent theme in government policy development since the advent of democracy in 1994. Between 1994 and 2007, seven White Papers, three Green Papers, 26 Bills (of which 17 were amendment bills), 35 Acts (of which 22 were amendments to existing laws), 11 regulations, 52 government notices and 26 calls for comments were published. The overriding purpose has been to promote equitable and universal access to meaningful learning opportunities.

There has been significant progress towards equity, equality and redress in post-apartheid South Africa, and yet a sobering reality, noted by the National Planning Commission, is that an estimated 48% of the population live on less than US\$ 2 a day, and that, at 0.67, the Gini coefficient is the highest in the world (National Planning Commission, 2011). In the second quarter of 2013, while the overall 'strict' unemployment rate was 25.6%, 32.9% of youth between the ages of 15 and 24 were not in employment, education or training in the country as a whole. If the expanded unemployment rate, which includes 'discouraged work-seekers' is taken, it is much higher in both categories (Statistics South Africa 2013, xvi). In recent years, key education indicators have shown that mastery of basic competencies is at a very low level. This has strong implications for employment and economic growth. It has led to much policy and research activity, reflected in, for instance, the Development Bank of Southern Africa's Road Map process in 2010, the National Planning Commission findings in

2011, the National Education Evaluation and Development Unit (NEEDU) report in 2012 and the Department of Basic Education's Action Plan 2014.

Twenty years after the first democratic elections, tests revealed that South African learners are far from achieving minimum, basic competencies across the curriculum. It is the poorest and the most marginalised amongst these learners who are especially affected by poor quality education. If we take the Department of Education's systemic evaluation of Grade 6 in 2005 as a baseline, learners obtained a national mean score of 38% in the Language of Learning and Teaching, 27% in Mathematics, and 41% in Natural Science (Department of Education, 2008).

Six years later, the results of the 2011 Annual National Assessments, although not comparable, revealed achievements at a similar level to 2005. In this assessment of almost 6 million primary school learners in February 2011, Grade 3 learners achieved an average of only 35% for literacy and 28% for numeracy, while Grade 6 learners managed 28% for languages and 30% for mathematics (Department of Basic Education 2011, 20). Disaggregated, these results varied markedly between provinces and between quintiles. Across grades 1 to 6, learners in quintile five schools received scores 10–15% higher than their counterparts in other quintiles.

International tests such as Monitoring Learning and Achievement (MLA) administered to Grade 4 in 1999, the Southern and Eastern African Consortium for Monitoring Education Quality (SACMEQ) written by Grade 6 learners in 2005, the Trends in International Mathematics and Science Study (TIMSS) administered to Grade 8 learners in 2003 and 2010, and the Progress in International Reading Literacy Study (PIRLS) conducted with Grade 5 learners in 2006, all suggest that South African learners are among the worst performers in Mathematics and Literacy in southern and eastern African countries (Bloch 2009, 60–68).

In the 2011 PIRLS test, 43% of South African learners were not able to reach the low international benchmark (Howie et al. 2012). SACMEQ III focused on education inequality, and noted that the poorest 20% of learners in South Africa perform far worse than most of their peers in other southern and eastern African countries (Spaull 2012). In the fifteen countries in the region, the poorest learners in South Africa are at 12th place for mathematics, and 14th for reading.

The Diagnostic Report of the National Planning Commission (2011) notes that apart from a small minority of learners who attend former-white schools and a small minority of schools

performing well in largely black areas, the quality of public education remains poor. Learners in historically white schools perform better, and their scores improve with successive years of schooling. By contrast, in the majority of schools with black learners, learner scores start lower, and show little improvement between grades 3 and 5. Where there has been some improvement as measured by the pass rate, as in the 70% who passed the 2011 NSC examination, only 23% achieved a university entrance pass (NPC 2011).

Against this backdrop, education quality, teachers' knowledge, school reform, and the institutional mechanisms to achieve meaningful and equitable access to schooling have been widely discussed. Particular emphasis has been placed on the issue of standards, the purpose of high stakes examinations, and university throughput and retention, all of which have thrown into sharp focus the quality, purpose and value of the National Senior Certificate.

2. AN OVERVIEW OF THE PUBLIC HEARINGS AND SUBMISSIONS TO THE MINISTERIAL COMMITTEE

The submissions widely welcomed the initiative of the Minister of Basic Education to review promotion requirements for the National Senior Certificate, noting that the review was not restricted to one component of the qualification, but included consideration of general vocational pathways to complement the academic stream. The starting point of a number of submissions was that standard-setting begins in the Foundation Phase of our education system, and that standards must be set concurrently with the creation of a proper learning environment, a culture of learning, and a dedicated and well trained and effectively managed professional teacher corps. The Language of Learning and Teaching and its relationship to poor education outcomes was highlighted, and the concomitant negative prognoses for future study for the candidates who have not developed a good command of it.

Over 80% of South Africans have English as their LOLT, and yet fewer than 10% have it as their home language. Submissions proposed that curriculum structure, teaching methodology, number of languages studied, and the timing of the transition from home language to another language as LOLT should be considered. The promotion requirements raised a great deal of reaction, often emotional and not well informed, but it is important to note that there was wide consensus among those making representations on the need to raise the requirements at all levels of pass: NSC, Higher Certificate, Diploma, and Bachelor's.

A criticism was that while there was a lot of content knowledge prescribed for gateway subjects, the level set for passing did not require in-depth knowledge. This raised the question of the spread of level of cognitive demand within question papers. The idea of an aggregate pass was mooted, with the argument that this would perhaps compensate for poor performance in some subjects and exceeding expectations in others. The need for system-wide change was raised, with the observation that in order to achieve better quality passes in the National Senior Certificate the entire assessment system of secondary schooling should be addressed. The need to look at both the improvement of the NSC qualification and the improvement of education was forcefully urged (Tim Gordon, Governing Body Foundation, Public hearings 29th October 2013). However, the point was also made that a pass mark of 30% for individual subjects is not radically new and that many generations of South Africans came through a system where the pass mark was 33% (see e.g. Chisholm 2013).

The need for different curricular paths for the NSC was raised, to take proper account of the different career paths for which secondary schooling has to prepare learners. The need to investigate a general vocational pathway was raised, offering a parallel educational qualification to the current general academic qualification. However, this had the corollary that the vocational path requires both credible FET colleges and other training opportunities to be made available through greater involvement of the business and industrial sectors. Industry submissions noted further that the low pass requirements were a significant barrier to entry for youth wanting to enter a trade, in particular because of the increasing complexity of trades due to technological advances (Sean Fenn, GM Imperial Holdings, written submission 4 October 2013).

The South African public tends to 'disconnect' from the standards debates, which it sees as removed from its real life situation (C Look, UJ written submission, 5 October 2013). Look notes that scepticism about high stakes public testing and 'raising the bar' arises from three major considerations: public distrust of the education system, the perceived inferiority of school-based assessment as compared with external written examinations, and the desire to compare schools. Any changes in the testing regime must be based on the principle of fairness and equity. Raising the pass requirements will mean that large numbers of learners will not pass at the previous levels, and the challenge is how to deal with this, systemically and politically. However, despite the systemic and political challenges, there was substantial agreement in the submissions on the need for a 'stretched goal', to be achieved by raising pass requirements.

The question of NSC standards was raised in relation to higher education, partly because a number of universities are instituting their own assessments. Widespread public concern about educational quality was evident, underlying a call to take seriously what appear to be low pass requirements for the NSC. However, the issue is complex. From another perspective, Higher Education South Africa (HESA), the organisation of Vice-Chancellors of South African universities, argued that the NSC is an important qualification based on curricula that are a significant improvement on those that we had in the 1990s, and that the NSC is a measure, even if an imperfect one, of how well our schools are performing (written submission, 10 October 2013).

In response to some criticism of the “usefulness” of the NSC, and the suggestion that South African public universities are abandoning the NSC as the basis for selecting applicants in favour of National Benchmark Test results (NBTs), HESA submitted that no university has abandoned, or intends to abandon, the use of the NSC results for admissions purposes. Most places are awarded solely on the basis of NSC results and many universities continue to use NSC results as the main basis for making admissions decisions.

3. SUMMARY OF THE HISTORICAL BACKGROUND TO THE DEVELOPMENT OF THE SCHOOL-LEAVING QUALIFICATION

The National Senior Certificate is a three year qualification which is attained after completing grades 10, 11 and 12. It is, however, based on the teaching and learning that takes place over the full twelve years of schooling.

There has been a steady improvement in the structuring and processes associated with the examination system in South Africa since 1994. These included instituting a common, centralised examination system across the country, re-orientation and efforts to increase the cognitive demands of the examinations in particular since 2008. There has also been a noticeable increase in the pass rate since 2008, attributed to sustained effort, support and development throughout the system. The primary purposes of the NSC are ‘to equip learners with the knowledge, skills, attitudes and values that will enable [them] to participate meaningfully in society, provide access to higher education, facilitate the transition of learners from education institutions to the workplace; and provide employers with a sufficient profile of learner’s competencies’ (DBE, 2013a). While the pass rate has expanded substantially in recent years from 62.7% in 2008 to 73.9% in 2012 (see table 1), concern has been expressed that the number of candidates has declined, and that the throughput of

children who enter Grade 1 and finally sit the NSC is less than 50%. This is attributed to a change in the age of entry policy in Grade 1 in 2000, and grade repetition throughout the interim years which means that the group sitting the examination is reduced in size. Figures 1.1 and 1.2 are taken from the 2013 NSC Technical Report (DBE 2013b). Figure 1 shows that the NSC pass rate has risen substantially.

Figure 1.2 shows that some of the biggest improvements have been achieved in the poorer provinces – Mpumalanga, Limpopo and KwaZulu Natal.

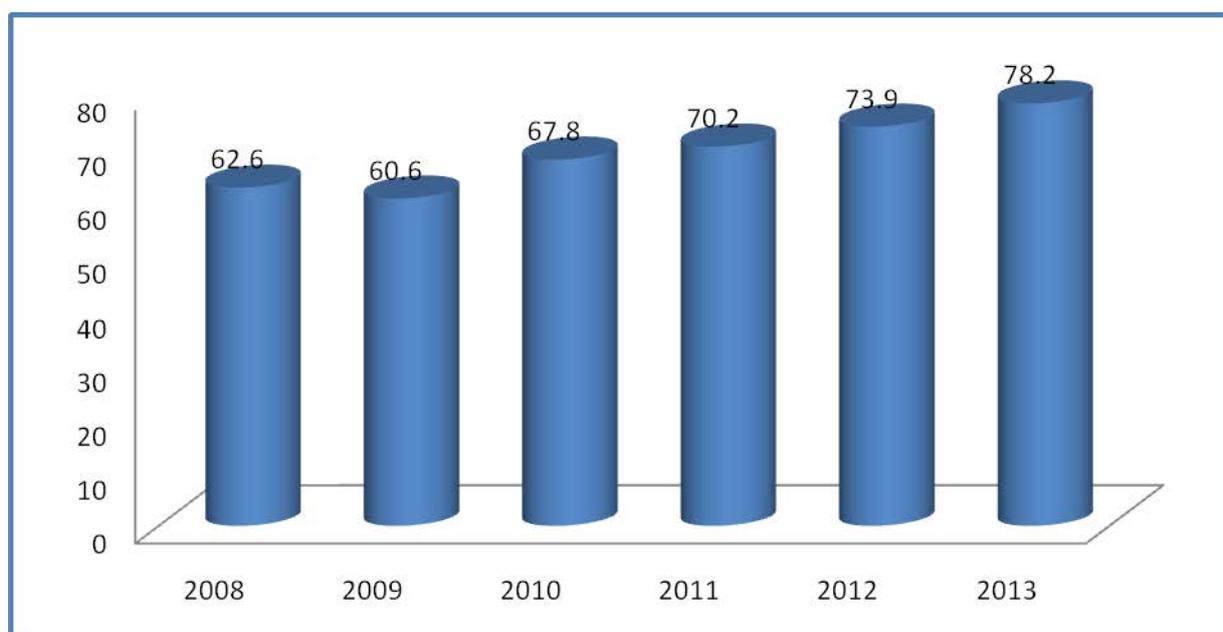


Figure 1.1: National Senior Certificate pass rates 2008–2013

The overall achievement rate for 2013 is 78%. This is an increase of 4.2 percentage points from the 2012 achievement rate.

Province	2013		
	Total Wrote	Total Achieved	% Achieved
Eastern Cape	72 138	46 840	64.9
Free State	27 105	23 689	87.4
Gauteng	97 897	85 122	87.0
KwaZulu Natal	145 278	112 403	77.4
Limpopo	82 483	59 184	71.8
Mpumalanga	50 053	38 836	77.6
North West	29 140	25 414	87.2
Northern Cape	10 403	7 749	74.5
Western Cape	47 615	40 542	85.1
National	562 112	439 779	78.2

Figure 1.2: NSC Results by Province 2013

Under the apartheid government, examinations were administered by nineteen racially and provincially defined departments resulting in different standards across these departments. In 1994, the nineteen departments were integrated into one national Department of Education, bringing with it the need for one national examination system. The transition to a single national system of examinations has been gradual. Twenty years down the line, significant progress has been made in the establishment of a national standard which can be regarded as internationally comparable. The establishment of the external quality assurance council, Umalusi, has advanced the remit of a national examination system, and the establishment and maintenance of a national standard. In 1997, the national Department of Education took over an unwieldy Senior Certificate curriculum set out in the Policy document, *Résumé of instructional programmes in public schools*, Report 550 (97/06) (see DBE 2012b). Subjects were differentiated into higher, standard and lower grade, creating a large number of separate subjects, each of which had to be examined.

It was only in 1996, that the first examinations under the democratic dispensation were administered by the nine Provincial Education Departments, and quality assured by Umalusi's predecessor, the South African Certification Council (SAFCERT). The administration of the examinations and the marking of scripts and processing of results were the responsibility of the provincial Education Departments. In 2000, the Department of Education took on the responsibility of setting national examination question papers in five key subjects, later increased to 11 gateway subjects. The initiative was designed to set a common national standard in these subjects.

The Minister of Education, Professor Kader Asmal, argued that the setting of nine different question papers by the nine Provincial Education Departments entrenched nine different standards, even though learners were finally awarded the same certificate by SAFCERT. In 2002, with the promulgation of the General and Further Education and Training Quality Assurance Act, 2001 (Act no. 86 of 2001), Umalusi was established as the successor to SAFCERT, with an expanded quality assurance mandate. The Ministerial Committee set up to conduct an "Investigation into the current system of differentiation, namely Higher, Standard and Lower Grade" (2002) made some important observations. These laid the basis for the revision of the Senior Certificate. The observations included:

- (a) Senior Certificate subjects differ widely with respect to quality.
- (b) The Higher Grade, Standard Grade and Lower Grade differentiation system is cumbersome and unreliable.

- (c) The conversion system for Higher Grade, Standard Grade and Lower Grade differentiation is too complex.
- (d) It does not articulate with other qualifications in the FET Band and inhibits learner mobility.
- (e) It is further complicated by a complex system of Higher Education entrance requirements, and
- (f) African Languages were taught and examined differently from English and Afrikaans. In the teaching and examining of African languages as First Languages the aim was language maintenance and development rather than cognitive development as is in the case of English.

The final outcome of the review of the NSC, gazetted in July 2005, was a qualification which demonstrated sufficient continuity with the structure of the Senior Certificate, while introducing three key features. Firstly, there was more specification of subjects through the requirement that all learners take two languages, that all learners take either Mathematics or Mathematical Literacy and that all learners take Life Orientation. Secondly, the distinction between Higher Grade and Standard Grade and the conversion to Lower Grade was abandoned. Thirdly, most subjects were significantly revised, some were renamed and some removed. These changes caused much anxiety amongst teachers and officials, with concerns about system preparedness. In terms of the assessment structure, there was concern about the impact of doing away with the different grades, and about the weight allocated to school-based assessment (SBA).

The structure of the envisaged qualification signalled that it was already a specialised curriculum, rather than a general or comprehensive one, in that learners were expected to select subjects within a specific learning field, so that their NSC would have a certain degree of specialisation. This was based on the notion that a post-general education should be specialised, and that all qualifications at this level should specify fundamental, core and elective components. The fundamental component was Life Orientation, while the core comprised two languages and Mathematics, and three electives were required, two of them in the same learning field.

Senior Certificate with Endorsement	National Senior Certificate
Offer a minimum of 6 subjects selected from six groups, namely A-F (open selection) 4 subjects on HG and 2 on SG	Offer 7 subjects
<ul style="list-style-type: none"> A. Official Languages B. Mathematics C. Natural Sciences D. Non-official languages E. Human Sciences F. General (Vocational) 	2 Groupings: one listing all compulsory subjects and one listing optional subjects The 4 compulsory subjects are: 2 official languages Mathematics or Mathematical Literacy, and Life Orientation
Offer two languages, 1 First Language HG and 1 Second Language HG	Offer 2 languages, 1 language at HL and 1 language at FAL
Offer a further 4 subjects at least 2 on HG and 2 at SG, spread over 4 groups A-F	Offer a further 3 subjects
Pass at least 5 subjects including the two languages, one at First Language HG Level, the other at First or Second Language Level, HG	Pass at least 6 subjects
Pass at least 4 HG subjects at 40% unless one of the four is Second Language HG where the pass requirement is 33.3% and 2 SG subjects at 33.3%, provided that if there is an aggregate of 950 marks, one of these two may be failed with a mark of no less than 20%.	Pass in 3 subjects, including 1 language at HL at 40%, and 3 subjects at 30%. For Bachelor degree study, a learner must pass 4 designated subjects at 50% in each subject.
Obtain a minimum aggregate of 950 marks	No aggregate
One subject may be failed at 20%, provided an aggregate of 950 marks is obtained	One subject may be failed, provided the SBA of that subject has been completed, otherwise an incomplete result
N3 subjects are not recognised	Only 1 subject developed by an approved assessment body may be offered
Conversion HG to SG. No conv. to LG	No conversions

Figure 1.3 Main differences between the Senior Certificate and the National Senior Certificate

The Committee also recommended that the current form of differentiation in terms of HG/SG and the conversion to LG be abolished. It was noted that such differentiation required a

greater degree of expertise than currently practised, both in the understanding of student learning and in associated pedagogical practices.

The last year for an examination based on the old Senior Certificate curriculum was 2007. This examination involved the 11 nationally set examination papers and various provincially set examination papers. In 2008, the National Senior Certificate was put in place.

The minimum duration of the National Senior Certificate grades 10–12 (general) programme is three years. For a candidate to obtain a National Senior Certificate, he or she must:

- (a) Complete the programme requirements for Grades 10, 11 and 12 separately and obtain the distinct outcomes and associated assessment standards of all three years, and
- (b) Comply with the internal assessment (SBA) requirements for Grades 10, 11 and 12, and the external assessment.

The qualification is structured according to specific categories of subjects and rules of combination. The minimum requirements to obtain a National Senior Certificate are:

- (a) Achieve at least 40% in three subjects, one of which is an official language at Home Language level;
- (b) Achieve at least 30% in three subjects, and
- (c) If a seventh subject is failed, provide full evidence of having satisfied the School Based Assessment component in that subject.

The efforts by the DBE to subject its question papers to international scrutiny and benchmarking by reputable institutions, clearly demonstrates its commitment to pursuing international quality standards in education. International benchmarking of question papers was done for the first time in 2002 with the Scottish Qualifications Authority (SQA). This served as the first step towards improving the quality of the Senior Certificate papers (old qualification) and strengthening the national examination system. In 2007, the DBE took a decision to systematically benchmark the standard of the NSC question papers with three highly respected international bodies, Cambridge International Examinations (CIE), the Scottish Qualifications Authority (SQA) and the Board of Studies, New South Wales (NSW). The 2010 and 2012 NSC question papers were subsequently subjected to international

scrutiny in 2011 and 2013, respectively. The Benchmarking process covered seven critical subjects, viz., Accounting, Mathematics, Physical Sciences, Life Sciences, History, Geography, English First Additional Language, and Mathematical Literacy. The 2011 and 2012 benchmarking process included HESA as an intimately concerned body. The reports emanating from the benchmarking influenced the quality of the question papers set in the years that followed.

The DBE sees benchmarking as an on-going process of evaluation, critical to promoting public confidence in and the credibility and value of the National Senior Certificate qualification in South Africa. The aim is to ensure that high level skills are being assessed by South African papers in a creative manner that enables learners to demonstrate critical thinking and problem-solving skills. The results of the first few evaluations confirm that the opportunities for interpretation and extended critical writing need to be increased in examination papers and the proportion of low mark retrieval questions needs to be reduced. Once the first cohort of learners completed their Grade 12 for the NSC in 2008, the higher education sector became directly engaged as universities tried to adjust their entry requirements.

The minimum entry requirements for access to higher education had been determined by proclamation in the Gazette, but the specific entry requirements for particular faculties were determined by institutions without much knowledge of the changes in the qualifications. Debates about which programmes required a pass in Mathematics and Science and what the level of competence in English should be were the main focus of these discussions. Higher Education South Africa had commissioned research using an independent placement test (the National Benchmark Test – NBT), and these test results suggested that school-leavers with an NSC were not well prepared for higher education study despite good NSC results. Fewer than half of the 11500 students tested across a range of universities were deemed proficient in academic literacy and only 7.5% were sufficiently numerate not to require extra support in mathematics.

These findings and the surge in the numbers of students qualifying for university entrance suggested that the schooling system was not preparing students at the right level. A number of studies tracking particular groups of students have provided a more nuanced account, suggesting that the NSC learners are capable but have a different skill set, or that the NSC is a reliable predictor at the top end of the achievement scale (see for example Essack et al. 2012; Hunt et al. 2011). The recent CHE Task Team report which proposes a four-year undergraduate degree shows the extent to which South Africa is not getting the graduates it

needs: “just half of those who start a degree programme at our universities get a degree.” It then notes that “Poor academic preparation at school” is “the dominant learning-related reason” for poor university performance – but that there is “no prospect” that the schooling sector will be able to produce the numbers of adequately prepared matriculants that higher education requires “in the foreseeable future” (CHE 2013, 16f). The CHE report makes important observations, relevant to the quality of current matriculants and their prospects for throughput into the post-secondary sector. It notes that “despite there being a small intake that has good academic potential, performance in higher education is marked by high levels of failure and dropout.”

- (a) Only about one in four students in contact institutions (that is, excluding UNISA) graduate in regulation time (for example, three years for a three-year degree).
- (b) Only 35% of the total intake, and 48% of contact students, graduate within five years.
- (c) When allowance is made for students taking longer than five years to graduate or returning to the system after dropping out, it is estimated that some 55% of the intake will never graduate.
- (d) Access, success and completion rates continue to be racially skewed, with white completion rates being on average 50% higher than African rates.
- (e) The net result of the disparities in access and success is that under 5% of African and coloured youth are succeeding in any form of higher education. (CHE 2013,15)

Higher education needs “between twice and three times as many well-prepared entrants as the pre-tertiary sectors [schools and colleges] are currently producing – around 100 000 additional candidates”, the report says. But neither the schooling nor the further education and training (FET) college systems make this achievable in the “foreseeable future” (CHE 2013, 17). Although “the level of dysfunction in schooling must continue to be a primary focus of corrective effort, [the report concludes] that the overwhelming weight of evidence from current analyses of the school sector is that there is effectively no prospect that it will be able, in the foreseeable future, to produce the numbers of well-prepared matriculants that higher education requires” (CHE 2013, 17).

The report is similarly sceptical about FET Colleges, saying their "priorities and capacity" will not enable them to produce "a substantial proportion of the well-prepared candidates for higher education that would be needed" (CHE 2013, 17). What the CHE report brings into sharp focus is the policy discussions of the early 2000s and the expectations which located the NSC as a primarily academic and specialised qualification alongside more vocationally-orientated alternatives for post-compulsory, post-general education learners. In fact, the NSC, like its predecessor the Senior Certificate, remains the main exit point from the schooling system. Despite public perception, the structure of the old Senior Certificate set the pass marks for subjects at similar and even lower levels than the NSC, particularly by converting failure at one level into a pass at Standard Grade or Lower Grade.

The introduction of a Further Education and Training Certificate (FETC) was the original vision for the exit point at the end of secondary school, FET College and workplace training. The intention, articulated in the Green Paper on Further Education and Training, was to establish a post-compulsory Further Education and Training system (the FET Band), comprising schools that focused on an academic track. Very little of this vision actually materialised by the time the NSC was implemented and much of it has either been abandoned or is only being implemented now. The notion of Grade 9 being an exit point from the system was never developed seriously. Because of resource constraints, colleges were not expanded or reconceptualised in the manner envisaged in the Green Paper, where they would accommodate the majority of mainstream learners.

The National Certificate (Vocational) (NCV) was not developed in parallel with the NSC. Schools remained the institution of choice (or necessity) for more than 90% of learners enrolled in the FET Band. However, the curriculum that was developed for the FET schools did adopt certain of the assumptions of the imagined future system. The accommodation of vocational subjects from NATED 190 within the structure of the NSC qualification was removed, initially vocationally orientated school subjects were not developed (on the assumption that these would now be offered at colleges), and the need for standard and lower grade was removed because the learners that these catered for would not be in the academic stream. In addition gateway academic subjects such as Mathematics were made compulsory (with the introduction of Mathematical Literacy as an alternative for those not planning to enter science and commerce streams at university).

Currently about three quarters of the candidates who pass the examination achieve a pass that permits access to diploma and degree programmes offered by universities, while very few candidates achieve the basic pass. School leavers need to be accommodated across a

spectrum of post-school institutions including (but not predominantly) universities. Yet much of the current focus of the debate has been shaped by the NSC graduates' success at university level programmes. That this should be a major concern in a country aiming to participate more fully in the global knowledge economy is clear. However, because the developments envisaged in the Green Paper have not taken place, the NSC must of necessity fulfil a range of purposes, including as a school leaving certificate for those who want to join the world of work and for those who want to pursue further studies at various post-school institutions. It is of major national importance that these needs also receive serious attention.

Whether the NSC is out of alignment with international norms is addressed through a review by Umalusi (2011) of the pass requirements of two international systems (the Cambridge International Examination and the International Baccalaureate) and seven selected countries that have different systems to South Africa. The conclusion is that, while it is problematic to compare systems, there are a number of countries that set their pass marks at the same or even lower levels. The suggestion that 50% is the norm internationally is not borne out by the survey.

4. PROMOTION REQUIREMENTS

Despite the degree of institutional stability achieved by the NSC through significant curriculum reform, a number of commentators have raised concerns about the pass mark requirements for the qualification within the context of wider concerns about the quality of the schooling system. There is a perception that the pass mark is 30% and that this is too low, either because it signals that learners have only mastered 30% of the material, or that the pass requirements are lower than they used to be, or that low minimum pass marks set low expectations, or are out of alignment with international practices. A word of caution is necessary. The pass mark does relate to quality, but it does not in itself engage with fundamental concerns about quality which can only be addressed in terms of the quality of teachers, materials, curriculum documents, assessment, and classroom practice. Raising the pass mark without attention to these concerns is destined to make the last case worse than the first.

- (a) The 30% pass required in most subjects was too low, and that this entrenched mediocrity in the system. Jansen, speaking at the Umalusi Conference in 2012, went on to propose that the pass mark be raised to 50%. This call has been repeatedly

echoed, often justified on the basis that this is the level required at university or in other countries. The implications of heeding such a call are explored in research and scenario planning done by Umalusi for the period 2008 to 2011. Three scenarios were prepared.

The **first scenario** sets the pass requirement at a minimum of 50% achieved per subject written. This would have a major effect, reducing the pass rate to around 10%. The **second scenario** explores the effect of a requirement that students should achieve a 50% aggregate. Here the pass rate is about 40%. Neither option is deemed realistic given the general concerns about pass rates. The third of the scenarios prepared involves raising the pass levels for LOLT and requiring a 50% aggregate for Bachelor's level passes. Its implications are set out in Figure 1.4 and are discussed below.

	2008		2009		2010		2011	
	Current	Scenario	Current	Scenario	Current	Scenario	Current	Scenario
Bachelor	23.01	22.43	22.79	22.36	26.52	25.40	27.42	26.49
Diploma	25.61	15.12	25.86	16.04	29.31	14.76	30.60	16.39
Certificate	21.10	28.58	18.56	24.22	18.26	26.45	18.42	27.37
NSC	0.04	3.64	0.11	4.71	0.14	7.62	0.11	6.29
Fail	30.23	30.22	32.68	32.68	25.77	25.77	23.46	23.45
Total	100	100	100	100	100	100	100	100

Figure 1.4 Umalusi Scenario 3 (Source Wedekind 2011)

- (b) Variations of the **third scenario** are based on a strengthening of the routes into higher education programmes by focusing on the requirements for the language of learning and teaching (LOLT), which is currently set at 30% and improving the overall level of the pass mark. Research on student success at university suggests that achievement in the LOLT is a good indicator of success in higher education programmes. If this were raised to 50% for the Diploma and Bachelor's pass and to 40% for the Higher Certificate pass there would be no impact on the overall pass rate, **but it would require some re-categorisation of passes within the NSC**. If this were coupled with improving standards in the examination, and a much clearer reporting of the category of NSC pass, the effect could also be positive at a symbolic level, with a 50%

aggregate being a viable requirement for Bachelor passes, providing clearer signals to employers, education providers and students, without generating discord about drops in the overall pass rate.

- (c) One of the concerns that has been emerging from research into success and retention of students in higher education institutions is that while the NSC does generally act as a useful predictor of success in a range of programmes, the current Bachelor's pass category is not set at the correct level. The high dropout rates from university programmes suggest that a Bachelor's pass does not adequately signal whether a student is likely to be able to cope with university studies.
- (d) Current Bachelor's level pass requirements demand that students achieve at least 50% in four designated subjects, yet they only have to achieve 30% in the language of learning and teaching (LOLT) of the university they are applying to. Scenario Three as applied to the 2008-2011 data has the following implications. Change in the requirements for a Bachelor's and Diploma level pass does not have an effect on the overall pass rate, and interestingly only has a minor effect on the numbers of learners achieving a Bachelor's pass (0.77% on average across the four years for which the data was run). It also appears that the majority of the current Bachelor's passes are achieving an average of 50% or higher and so this is unlikely to have a major effect on the spread of results. In effect, adding these requirements to the Bachelor's level merely describes what is already the case, namely that students with a Bachelor's pass are passing the LOLT at 50% or higher and achieving an aggregate of over 50%.
- (e) A more significant effect of increasing the language requirement can be seen in the students currently achieving a Diploma level pass. An average of 12,26% of the students currently qualifying for Diploma passes would no longer achieve this pass and would qualify either for the Higher Certificate or NSC without any higher education admission. This adjustment to the three categories of pass may be useful if the space created on the NQF at level 5 is properly developed, as a much larger grouping of students will be channelled into programmes that could be offered across a range of institutions such as FET colleges and private providers.

The problems faced by universities in appropriately placing students would not be significantly resolved by this adjustment, and need to be examined in terms of specific entry requirements related to achievement and subject choice. However, the total number of students achieving a Bachelor's or Diploma pass would drop significantly, from 58.02% to 42.88% in 2014, potentially with large implications for university enrolment. Given the role

that the NSC plays as the main exit point from the schooling system, it is necessary to understand what role it should play, and what the patterns of achievement are that influence learner pathways and destinations. Wedekind (2011) identifies three broad groups with an interest in the NSC.

Learners need both a certificate of completion and a record of achievement that signals something about what they are capable of. Employers and post-school educational institutions want a mechanism that differentiates the applicants and allows for selection into different jobs or learning programmes on the basis of reliable indicators of future success. Decision makers, including politicians and civil servants who have political or personal accountability and have the authority to allocate resources, are usually concerned with managing perceptions and meeting targets such as pass rates at a macro level. All groups, and subsets within each group, have distinct interests. The system has to find ways of balancing their demands. The current profile of levels at which students passing is given in Figure 1.5:

Province	Year	Total Wrote	Bachelor		Diploma		Higher Certificate		NSC		Total success	
			Ach	%	Ach	%	Ach	%	Ach	%	Total Ach	%
National	2010	537543	126371	23.5	146224	27.2	91241	17	677	0.1	364513	67.8
National	2011	496090	120767	24.3	141584	28.5	85296	17.2	467	0.1	348114	70.2
National	2012	511152	136047	26.6	152881	29.9	88604	17.3	297	0.1	377829	73.9
National	2013	562112	171755	30.6	173292	30.8	94556	16.8	176	0	439779	78.2

Figure 1.5 Profile of pass levels NSC 2010–2013

***Note: “Ach” is achieved**

The committee notes that over 20% of candidates currently fail the Senior Certificate Examinations. This proportion must be reduced by improvement in schools. Less than 0.1% passes at the NSC alone, while over 75% of those who pass, do so at the Diploma and Bachelor’s level. There is insufficient discrimination between pass categories especially between Diploma and Bachelor’s passes. It is proposed that this be addressed through raising the LOLT requirements, so as to improve the distribution and significance of passes across these categories.

The recommendations below are restricted to comments on the promotion requirements, and therefore the standard of the qualification itself. They do not deal with the standard of the curriculum or the standard of implementation. Other investigations, e.g. the Dada report of 2009, have considered these matters, which are critical for quality.

5. RECOMMENDATIONS

The primary recommendation is that the NSC should provide a more accurate assessment of learner capabilities, and direct learners to the most appropriate post-school opportunities in further education, tertiary education or the labour market. This has implications for differentiation and for the requirements for the NSC. A more detailed differentiation is proposed between the levels of NSC passes, with particular attention to raising requirements to ensure that all learners, irrespective of level, have the appropriate skills and knowledge. The review of the requirements includes the removal of Life Orientation from the NSC curriculum, raising the requirements for LOLT from Higher Certificate onwards, and removing the provision for failing one subject from Diploma and Bachelor's passes.

The revised requirements for the different NSC levels will provide a better predictor of success in Further and Higher Education, and will be more conducive to relevance, and to preparing learners adequately to meet the demands of the 21st Century. In short, the proposed changes should contribute to improving the efficiency and effectiveness of the system. The detailed recommendations for structural and substantial change follow:

- 5.1 **Remove Life Orientation from the NSC examination, and redistribute the Grade 12 LO curriculum to Grades 10 and 11, with the exception of *Recreation and physical wellbeing* and aspects of *Career planning*.** This reduces the number of examinable subjects studied for the NSC from seven to six.

- 5.2 **Raise the overall minimum pass requirements for each level of pass above the basic NSC and establish a differentiated set of exit points from the NSC with clear access routes to the post-secondary sectors.** The level of requirements must be increased to improve the credibility of the qualification, with the requirements for LOLT at different levels given attention. (LOLT is discussed in detail in chapter 3.) Fuller recommendations for minimum promotion requirements below are based on the assumption that no fewer than 6 subjects are offered and that Life Orientation is no longer an examinable subject at NSC level.

5.2.1 Minimum requirements for basic NSC

- (a) Pass 3 subjects at 40% including an official language at Home Language level;
- (b) Pass 2 subjects at 30%; and
- (c) May fail the 6th subject, provided examination requirements have been met, and there is full evidence of the SBA in that subject having been completed.

5.2.2 Raise minimum pass requirement for entry to higher certificate study

- (a) Pass 3 subjects at 40 % including LOLT;
- (b) Pass at least 2 further subjects at 35%; and
- (c) May fail the 6th subject, provided examination requirements have been met, and there is full evidence of the SBA in that subject having been completed.

5.2.3 Raise minimum pass requirement for entry to diploma study

- (a) Pass LOLT at 50%;
- (b) Pass 4 further subjects at 40%; and
- (c) Pass 1 further subject at 35%.

5.2.4 Raise minimum pass requirements for entry to degree study

- (a) Pass 4 subjects at 50%, including LOLT;
- (b) Pass 2 further subjects at 40%. (If home language is not LOLT, it must be passed at 40 %.)

Recommendations 5.1 and 5.2 are summarised in Figure 1.6 below, which shows where there have been changes from current requirements:

	Current minimum requirements	New minimum requirements
NSC Curriculum requirements – all levels	Home Language and a second language at, at least, First Additional Language (FAL) Level, either of which may be LOLT Mathematics/Mathematical Literacy Life Orientation (LO) 3 Subjects from Group B	One official language at Home Language level and a second official language at, at least, FAL level. One of these must be the LOLT Mathematics/Mathematical Literacy 3 Subjects from Group B
Basic NSC Pass requirements	Pass 3 subjects at 40% including an official language at Home Language level Pass 3 subjects at 30% Can fail [the seventh] subject, provided there is full evidence of the SBA having been completed.	Pass 3 subjects at 40% including an official language at Home Language level Pass 2 subjects at 30% The sixth subject may be failed, provided examination requirements have been met, and there is full evidence of the SBA having been completed in that subject.
Higher Certificate admission	Meet basic NSC requirements Pass LOLT at 30% Can fail [the seventh] subject, provided there is full evidence of the SBA having been completed.	Pass 3 subjects at 40% including LOLT, provided that the official language taken as Home Language must be one of these three. Pass at least 2 further subjects at 35% The sixth subject may be failed, provided examination requirements have been met, and there is full evidence of the SBA having been completed in that subject.
Diploma admission	Meet basic NSC requirements Pass LOLT at 30% Pass 4 recognised subjects at 40% Pass 2 remaining subjects at 30%	Pass LOLT at 50%. Pass 4 further subjects at 40%, including the second official language Pass 1 remaining subject at 35%
Bachelor's degree admission	Meet NSC requirements Pass LOLT at 30% Pass 4 further subjects from the designated list at 50% Pass 2 remaining subjects at 40%	Pass LOLT at 50%. Pass 3 further subjects from designated list at 50% Pass 2 remaining subjects at 40%

Figure 1.6 The Comparative table of current and new minimum requirements for Grade 12

5.3 Raise cognitive demands in examining LOLT

The weighting allocated to the different levels of cognitive challenge must change. The current requirements for Grade 12 LOLT provide for 40% of the assessment at the lowest level (Level 1). It is recommended that a maximum of 15% should be at Level 1 and in combination Levels 1 and 2 should not exceed 30%. [LOLT is discussed in detail in chapter 3.]

5.4 Improve the credibility of School-Based Assessment

Currently, the quality and standard of SBA as an element in the NSC final mark is not yet sufficiently controlled for it to have credibility. However, there are valid concerns that dependence on a single appraisal in a public examination is unsatisfactory. We recommend that the implementation and moderation of SBA be thoroughly and regularly addressed during teacher development and teacher training, and that the statistical moderation process of Umalusi be strengthened with the inclusion of additional criteria for determining the reliability of the SBA. (See chapters 6 and 7.).

5.5 Explore broadening the general qualification to include a vocational pathway

Despite the changes proposed above, there is insufficient differentiation in the system to meet the needs of all students. (See chapter 5.) While structured differentiation in terms of vocational pathways could come to reflect the inequalities in our society, the absence of pathways has not prevented this outcome in practice. There is an under-education of many who fail the NSC or perform too poorly to enter productive employment, and who may be better served by a vocational stream. It is proposed that a vocational pathway be explored from grades 10 to 12. Immediate steps in this direction are:

5.5.1 Introduce the NCV in technical high schools

5.5.2 Introduce a Grade 9 exit certificate

5.5.3 Research the pathways available after Grade 9 in a changing post-school environment.

5.5.4 Bring Recognition of Prior Learning into the mainstream of educational pathways.

5.6 Improve all aspects of quality to give substance to the new structures

Realigning the pass requirements for the NSC has to be supported by a systematic focus on quality improvement in all aspects, including assessment, classroom practice, teacher knowledge, adequate resourcing and infrastructure, leadership and school improvement.

6. SYSTEM IMPLICATIONS OF THESE RECOMMENDATIONS

- 6.1 It is critical that scenarios be developed from careful data analysis along the lines initiated above to illustrate the implications of these changes. The possible scenarios could include a reduction of the pass rate, or a change in the distribution within the pass rate.
- 6.2 The public and the broader education community need to be ready for the associated challenges and opportunities. The public must clearly understand the minimum requirements to enter further study.
- 6.3 The integrity of the assessment system has to be maintained. A risk to be mitigated by Umalusi is that raising the pass mark may lead to making examinations easier under political pressure to maintain the pass rate, so that, e.g., the new 50% is actually the old 40%.

7. CONCLUDING COMMENTS

The recommendations made above attempt to address concerns that have been raised about the current NSC in a way that achieves a balance between stabilising the system and ensuring that there is real pressure for improvement. In a measure, the recommendations also attempt to realign the NSC with the reality that it is the major exit point from the schooling system and therefore cannot be focused solely on pathways into higher education. In that regard, the discussions underway for a revitalised post-school system with new qualifications at NQF Level 5 will inevitably lead to further change which cannot be anticipated here.

CHAPTER 2

MATHEMATICS AND MATHEMATICAL LITERACY

INTRODUCTION

School mathematics in general and learner performance in Mathematics in particular, have received unprecedented media and public comment in the two decades of post-Apartheid South Africa. This has been enabled in large measure by the many national and international assessments, examinations and studies that the South African schooling system has been subjected to, especially in respect of mathematics and science. South Africa's poor showing in mathematics performance (among other areas) on a range of different 'league tables' has generated wide speculation and has prompted studies to determine the reasons for this poor performance as well as to propose what needs to be done to improve the situation.

This chapter addresses the **terms of reference** of the Ministerial Committee which relate to Mathematics and Mathematical Literacy. These are:

- (d) To evaluate the currency of Mathematics and Mathematical Literacy and whether this is the best option for the South African schooling system in terms of preparing learners for the work place, higher education studies and personal citizenry.
- (e) To ascertain whether Mathematical Literacy should not rather be separated from Mathematics.
- (f) To investigate the possibility of introducing another level of mathematics, namely technical mathematics which is related to the technology subjects as proposed by the principals of Technical Schools.

In this chapter we draw on written and oral submissions, media reports, research papers, and a wide range of formal reports, documentation and analyses by various task teams on the subject of Mathematics and Mathematical Literacy. These include reports to the Department of Basic Education (DBE) itself (and the former Department of Education DOE), as well as reports from other bodies such as the Centre for Development and Enterprise (CDE), UMALUSI and the Human Sciences Research Council (HSRC). The main issues and themes arising in them are identified and discussed, providing the context for our

recommendations. In responding to our terms of reference, we provide evidence and arguments for each recommendation and spell out some of the implications for the educational system.

1. CONTEXT AND BACKGROUND TO FET MATHEMATICS

The differentiated system of education for grades 10 to 12, within which mathematics was offered, both before and following the advent of democracy in 1994, has been described and analysed in several reports. For example, the report of the Ministerial Committee appointed by Minister of Education Kader Asmal to conduct an Investigation into the system of differentiation, namely Higher, Standard and Lower grade in the then Senior Certificate examination, details the history and outcomes of various policy changes over half a century (DoE, 2003). With respect to the Senior Certificate (SC) system, (before the current National Senior Certificate (NSC) was introduced), the report notes: “The design features of the national differentiated syllabus and assessment system provide for grouping in subject fields and for separate syllabuses and examination papers for Higher Grade and Standard Grade subjects, and for conversion to a lower level pass mark” (DoE 2003, 25).

The Standard Grade (SG) Mathematics syllabus was a watered-down version of the Higher Grade (HG) in both content and cognitive demand. SG excluded several areas and topics of mathematics that were in the HG curriculum and SG examinations assessed a higher proportion of lower levels of knowledge, recall and comprehension. Not surprisingly, the numbers of schools offering SG and the number of learners taking SG Mathematics increased dramatically from 1994 to 2007. In terms of promotion requirements HG and SG had different pass marks of 40% and 33% respectively; and had different examinations and mark schemes (400 and 300 respectively).

Furthermore, failure at one level could be converted to a pass mark at a lower level. At various points HG failures of between 25% and 39% were converted to SG passes – and at one time raised to between 30% and 39% (DoE 2003). Given the considerable negative media commentary on the 30% pass mark in the current NSC, it is instructive to observe that initially Mathematics could be taken as a Lower Grade (LG) subject with a pass mark of 25%. A fail in SG could be converted to a pass at LG, well below 30%. This option of a LG pass was retained even when the LG subjects were discontinued in the SC curriculum. The last HG and SG Mathematics Grade 12 examination was written in 2007 by 347 570 learners, or 62% of all 564 775 SC learners who took the SC examination in that year. Of the

46 125 (8% of SC) learners who wrote it on HG, only 25 415 (4.5% of SC) passed on HG (at 40%+) and 7368 passed on SG; while of the 301 445 (53% of SC) learners who wrote it on SG, 116 445 (21% of SC) passed at that level (at 33.3%+) and 34 433 passed on LG (25%+). The 25 415 candidates who passed HG Mathematics, required for entry into a broad range of further study opportunities, constituted only 7.3% of those who wrote any Mathematics (HG+SG) and 55.1% of those wrote HG Mathematics. This data show that a ceiling had been reached that was proving difficult to break through.

Three problems remained a cause for concern and were meant to be addressed through various Mathematics curriculum reforms: a large proportion and number of Grade 12 learners not taking any mathematics; the increasing numbers taking SG rather than HG; and the relatively low pass rates in both. The Ministerial Committee of 2003 made a main recommendation “that differentiation be catered for in a single examination assessment”, but proposed that “even if only for a transitional phase, ...some form of differentiation in respect of key subjects such as Mathematics” be retained, and expressed a preference “to develop different forms of the subject (e.g. Mathematics and Advanced Mathematics)” (DoE 2003, 2).

This matter of further differentiation in Mathematics to three levels was later considered through another independent assessment by a Task Team appointed by the next Minister of Education, Naledi Pandor, in 2004. Their preliminary report (DoE 2005) made a case for Mathematics and Mathematical Literacy, recommended strengthening the Mathematical Literacy subject statements and learning outcomes, and proposed offering Mathematics through a core and electives. The resultant NSC Mathematics curriculum policy is aligned with contemporary international developments and trends, introducing new topics (such as Statistics and Probability) as well as new pedagogies and assessment approaches. It was introduced in a spirit of encouraging more learners to take Mathematics, along with a requirement that NSC candidates offer either Mathematics or Mathematics Literacy.

This immediately heightened the challenges of implementing a new Mathematics curriculum in a situation where large numbers of schools had not offered any Mathematics at all, and most teachers who had taught Mathematics had taught it on the SG only. There was a pressing need to upgrade teachers' knowledge and competence to teach the new curriculum effectively. To meet this situation in the short term, the areas of Mathematics in which learners were known to perform poorly (such as Euclidean Geometry) and new topics deemed to be difficult (such as Probability), were examined in a separate optional paper 3 with an expectation that system-wide teacher development would take place. However, the result was disappointing. Very few schools offered paper 3 and very few learners took it.

Arguably the envisaged teacher development also did not happen. The latest reforms in the NSC through the Curriculum and Assessment Policy Statement (CAPS) have integrated the content and outcomes of paper 3 into the Grade 12 examinations for all learners taking Mathematics. The NSC examinations on CAPS will be written for the first time in 2014. The main concern now in moving from the current NSC Mathematics curriculum to CAPS is the impact of the move on learners' performance in Mathematics in the absence of co-ordinated systematic teacher development and with the reported shortages of competent and qualified teachers to teach a new, more demanding Mathematics curriculum. The most recent *Investigation into the implementation of Maths, Science and Technology* confirms this main issue and concludes that "the first and most critical priority to address is to do with teachers and (mathematical) teaching related issues" (DBE 2013c, 4). This is also a major education system implication of our recommendations, discussed at the end of this chapter.

2. MATHEMATICS CURRICULUM: CHANGE VS STABILITY

A clear and recurrent theme discernible through the submissions made to the Ministerial Committee is a plea for curriculum stability, and concern at the negative effect that 'serial' curriculum change has had on mathematics teaching and learning on the ground. From 1994, each new Minister of Education has introduced curriculum policy reviews and reforms, ranging from early syllabus revisions to address the legacy of apartheid to Curriculum 2005 with Outcomes Based Education, followed by National Curriculum Statements in a new National Senior Certificate (NSC) and now the Curriculum and Assessment Policy Statement (CAPS). While curriculum policy reforms are expected and needed, the preparation for implementation in each case, and the time frames, pacing, training, resourcing and many other aspects that impact implementation, have left much to be desired. In hindsight, they were underestimated. Educational systems, at all levels, need time to engage and institutionalise any change.

Of particular relevance to South Africa is the observation that continuous changes impact the fragile, under-resourced parts of the education system most, and are more likely to contribute to their dysfunctionality than their improvement if the change is not given time to be bedded down. For example, teachers need time to understand and work with any curriculum revisions of content, pedagogy or assessment before they become competent in them, the more so if their foundational knowledge, as has been demonstrated to be the case in Mathematics, is not adequate or strong. At another level, quick, successive implementation of curriculum changes does not allow the envisaged improvements (or lack thereof) to be properly assessed. The steady implementation of the NCS for Mathematics

over the past six years is instructive in this regard. Evidence for some positive impact of curriculum stability can be observed in the improvements in the NSC Mathematics results, however marginal they may be. Notwithstanding the decrease in the proportion of learners writing NSC Mathematics from 2008 to 2013 (see Figure 2.3), Figure 2.1 shows gradual gains in the numbers passing NSC Mathematics at successive higher levels, especially in the last three years; and a decrease in the proportion performing below 30%. There is some basis for suggesting that the many interventions that have been made, however piecemeal and uncoordinated, are beginning to show a positive impact. Clearly, much more could be achieved if these were more coherent, systemic and systematic.

Further evidence for improvement is beginning to emerge in the international benchmarking reports commissioned by DBE and other bodies. (These are discussed in more detail in Chapter 7.) Following initial concerns about the standard of the first NSC Mathematics examination written in 2008, a review of various benchmarking and evaluation reports produced since then points to the overall conclusion that to a large extent the Mathematics examination papers were found to be adequate. Some challenges remain, and we have to acknowledge difficulties in comparing with education systems of different countries. However, a general view in the submissions made to the Ministerial Committee in respect of the Mathematics examination was that the quality of the examination papers was improving.

Just as the NSC curriculum has settled into the system, further reforms have been made and CAPS has been introduced. Based on the experience and evidence of the past six years, **a strong, principled recommendation, key to improvement, is that CAPS should be implemented for the next eight to ten years without any further curriculum policy changes.**

That is, no changes should be made in the official Mathematics curriculum in that period. This would enable the full focus and resources of national and provincial departments of education to be concentrated on improving all aspects of implementation of CAPS in a coordinated and systematic way, at all levels of the education system, for at least two administrative and political cycles. The consequence of accepting this recommendation would be that the next eight to ten years could be devoted to improving teacher quality, learning material and conditions for teaching and learning Mathematics. This would give any future Ministers of Basic Education an opportunity to demonstrate real and tangible gains in Mathematics teaching and learning outcomes. It would seem, in any case, that further changes in the NSC Mathematics curriculum will not, in themselves, yield further improvements in learner outcomes (see Figures 2.1 and 2.2).

The distribution of student performance in Mathematics in the NSC (Figure 2.1) is startlingly similar to that in the former Mathematics Higher Grade (HG) and Standard Grade (SG) examinations (Figure 2.2) when compared:

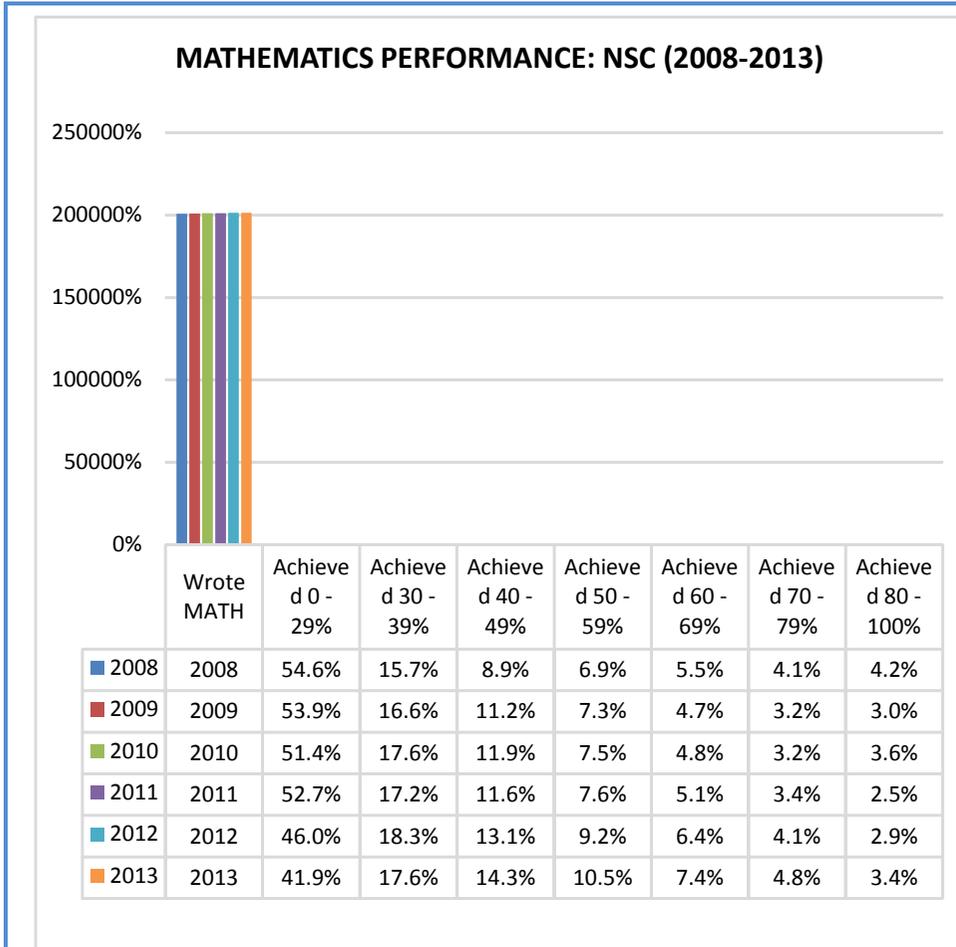


Figure 2.1: Performance in Mathematics in NSC Grade 12 (2008-2013)

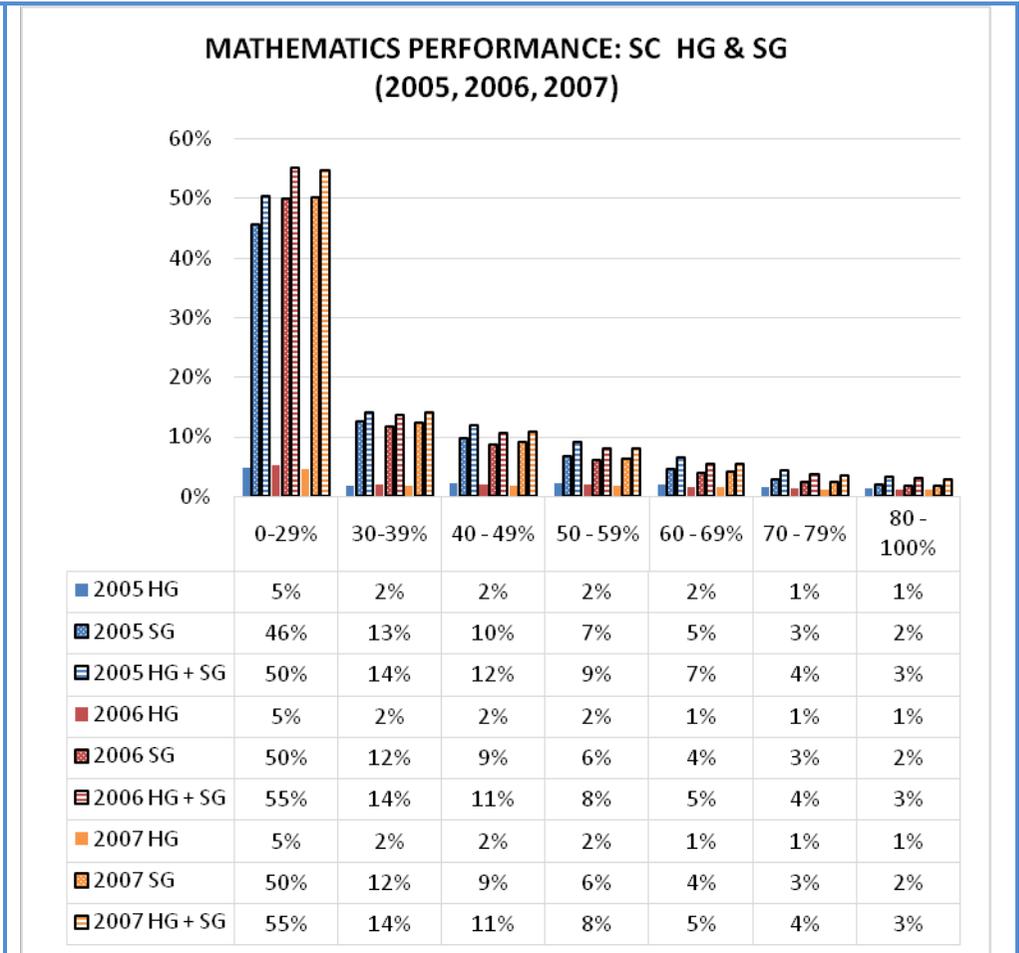


Figure 2.2: Mathematics HG and SG performance in SC Grade 12 (2005-2007)

What has not changed is the situation in the mathematics classroom. That needs attention. No amount of further tinkering with or reforming of the official Mathematics curriculum policy can take the place of the hard work needed on the ground in schools and classrooms and by respective provinces and districts. There are no shortcuts to improving the teaching and learning of mathematics. Unless a strong, concerted effort is made in implementation of this last reform through CAPS, the following ambitious goals and targets set by DBE and the *National Development Plan - 2030* will remain a dream:

The Department of Basic Education's plan is to increase the number [of learners eligible for a bachelor's programme] to 300 000 by 2024, with 350 000 learners passing mathematics and 320 000 learners passing physical science. The Commission proposes a target for 2030 of 450 000 learners being eligible for a bachelor's programme with Maths and Science. (NPC 2013, 305)

In 2013 only 171 755 Grade 12 learners qualified for Bachelor's entry; while only 63 152 learners had a pass of 50% or more and a mere 37783 had a pass of 60% or more in Mathematics, which is often the minimum requirement for access to bachelor's degree programmes in science, engineering, economics or health sciences.

In conclusion, keeping the Mathematics curriculum constant will not only mean a stronger focus on implementation but will also enable better analyses to be undertaken of what aspects and which parts of the education system need most attention to effect the greatest gains in learning outcomes.

We wish to emphasise that the recommendations which follow flow from and are shaped by this main recommendation; that CAPS should be implemented for the next eight to ten years without any further curriculum policy changes.

3. MATHEMATICAL LITERACY: VALUE AND PLACE IN THE CURRICULUM

In order to understand the issues that have emerged in relation to Mathematical Literacy, one has to understand the context in which it was introduced and the factors that led to its introduction. In 1995, only 38% of Grade 12 learners who wrote the SC examinations took any mathematics at all. Before the implementation of the NCS in Grade 10 in 2006 learners had the option to choose between Mathematics Higher Grade (HG), Mathematics Standard Grade (SG) or not taking mathematics at all from Grade 10 to 12. By 2007, when the HG

and SG Mathematics examination was written for the last time, a significant cohort of 217 202 (38% of SC) Grade 12 learners still did not take any mathematics at all. Mathematical Literacy was intended in the first instance to serve this cohort. The unknown factor in the implementation of Mathematical Literacy at the time was the large former SG Mathematics cohort (301 445 learners in 2007) and whether they would choose Mathematics or Mathematical Literacy.

Media reports and submissions to the Ministerial Committee raised a number of issues in respect of Mathematical Literacy. These may be summarised as follows:

- (a) A negative public perception of Mathematical Literacy as not being of value;
- (b) The perception that Mathematical Literacy is an easy option with high pass rates in Grade 12;
- (c) The lack of recognition of Mathematical Literacy for entry into further study and work opportunities;
- (d) Inadequate (wrong or no) school guidance and counselling on choosing between Mathematical Literacy and Mathematics;
- (e) High migration from Mathematics to Mathematical Literacy and growing enrolments in Mathematical Literacy at the expense of Mathematics enrolments, and
- (f) The relationship between Mathematics and Mathematical Literacy curriculum purpose, content and outcomes not being clear or well understood.

Successive Ministers of Education have given serious attention to these concerns. Two reports were reviewed by the Ministerial Committee – one produced by a Ministerial Task Team (DoE 2005) and the second a *Discussion Paper on the Currency of Mathematical Literacy* (DBE 2012c). We concur with the reports that Mathematics and Mathematical Literacy curricula must be clearly and properly distinguished in respect of purpose, content and outcomes as two different subject areas of equal importance. That is, Mathematical Literacy should not be seen or treated as a watered down, functional or practical mathematics. In this regard, the revisions made to Mathematical Literacy in the CAPS curriculum processes have addressed these concerns at official curriculum policy level. The challenge, yet again, is in improving implementation.

The importance and value accorded Mathematical Literacy competences may be observed internationally in the kinds of assessment studies being conducted and in recent curriculum reforms being made in several countries (see the ICMI Database Project which provides access to mathematics curricula from all over the world through the ICMI website: <http://www.mathunion.org/icmi/activities/database-project/introduction/>). One example is the well-known Programme for International Student Assessment (PISA), run by the Organisation for Economic Co-operation and Development (OECD). It focuses on real-life mathematical literacy-type tests administered to 15 year-olds across countries (<http://www.oecd.org/pisa/test/>). To change South African perceptions about the value and use of Mathematical Literacy, the curriculum has to be implemented in both letter and spirit.

In particular, the quality of the examination papers needs to be addressed, both to restore the subject's credibility and to provide an incentive for it to be taught as intended. In large measure, the curriculum changes that have taken place as part of the CAPS reforms appear to have addressed concerns raised in the submissions and the media. However, implementation remains a challenge. One significant step in this regard would be to introduce international benchmarking to improve the rigour and levels of assessment in Mathematical Literacy examinations. This would have the backwash effect of enhancing the reputation of Mathematical Literacy and would eventually facilitate greater acceptance of Mathematical Literacy results for further study and work opportunities.

However, it should be mentioned that while there was an 87.1% pass rate in Mathematical Literacy in 2013, the pass rates at the higher levels were troublingly low. Only 62.4% of the candidates passed with at least 40% or higher (DBE, 2013). The current trend is that fewer than half of Mathematical Literacy candidates pass at 50% and above. This belies the notion, often given credence in the media, that Mathematical Literacy is an easy subject with large numbers of learners performing well in it.

In conclusion, retaining the status quo of Mathematical Literacy in the NSC (together with Mathematics) but strengthening its implementation, as envisaged through CAPS, is supported.

Arguably the more difficult problem to address is the growing number of learners taking Mathematical Literacy as opposed to Mathematics (Figure 2.3).

Year	MATHE- MATICS Total Wrote	MATHE- MATICS % Annual Increase/ Decrease	MATHE- MATICS % Wrote	MATHE- MATICAL LITERACY Total Wrote	MATHE- MATICAL LITERACY % Annual Increase/ Decrease	MATHE- MATICAL LITERACY % Wrote
2008	300008		52.9	267236		47.1
2009	290630	-3.1	51.1	278156	4.1	48.9
2010	263034	-9.5	48.4	280836	1.0	51.6
2011	224635	-14.6	44.9	275380	-1.9	55.1
2012	225874	0.6	43.7	291341	5.8	56.3
2013	241509	6.9	42.7	324097	11.2	57.3

Figure 2.3: Learners writing Mathematics and Mathematical Literacy in Grade 12

The absolute number writing Mathematics has increased in successive years since 2011, but, in terms of the total number of matriculants, the pattern of a decreasing proportion writing Mathematics has been evident since 2008. The average annual increase in the number writing Mathematical Literacy over the period 2008 to 2013 is 4% with a similar (-3.9%) average annual decrease in the number writing Mathematics in the same period. Much more needs to be done in schools to provide correct information and career counselling for learners, especially in Grade 9 and during Life Orientation, where this is supposed to be undertaken. (A recommendation to assist in reversing this pattern and increasing the proportion enrolling for Mathematics will be made in the next section.)

We recommend that Mathematical Literacy be retained as reformed in CAPS, but that the curriculum policy intentions and enhancements in implementation be significantly strengthened.

This applies especially to addressing the quality of teaching, assessments and examinations. If this is done, it will go a long way to overcoming negative perceptions and improving the credibility of Mathematical Literacy. Research in South African schools shows how in the hands of competent teachers this important subject can be taught to achieve the broader societal goals of critical Mathematical Literacy as envisaged in the aims of the curriculum. See, for example, the journal *Pythagoras*, which has published a wide range of articles and research on Mathematical Literacy in South Africa, including a special issue in 2006 (No. 64).

In conclusion, improvement in the quality of assessments and examinations will increase the probability that Mathematical Literacy will be re-evaluated as a basis for admission to further and higher education.

To enhance this possibility and promote informed subject selection, **we further recommend that a national information awareness campaign about the value, place and role of Mathematical Literacy and Mathematics as distinct subjects in the NSC should be launched both in schools and in the communities that they serve.**

4. MATHEMATICS VS MATHEMATICAL LITERACY

Since the introduction of Mathematical Literacy alongside Mathematics, learners have been allowed to take any selection of subjects with almost no prescription on combinations. In the course of the Ministerial Committee’s consultations one of the issues that emerged from data provided by UMALUSI is that this freedom may be counter-productive, damaging learners’ future career and further study opportunities. For example between 2010 and 2013 an average of 16 791 learners who were doing Physical Science took Mathematical Literacy rather than Mathematics each year. Figure 2.4 shows the extent to which learners are choosing Mathematical Literacy rather than Mathematics with a selection of subjects in which Mathematics would normally be a co-requisite.

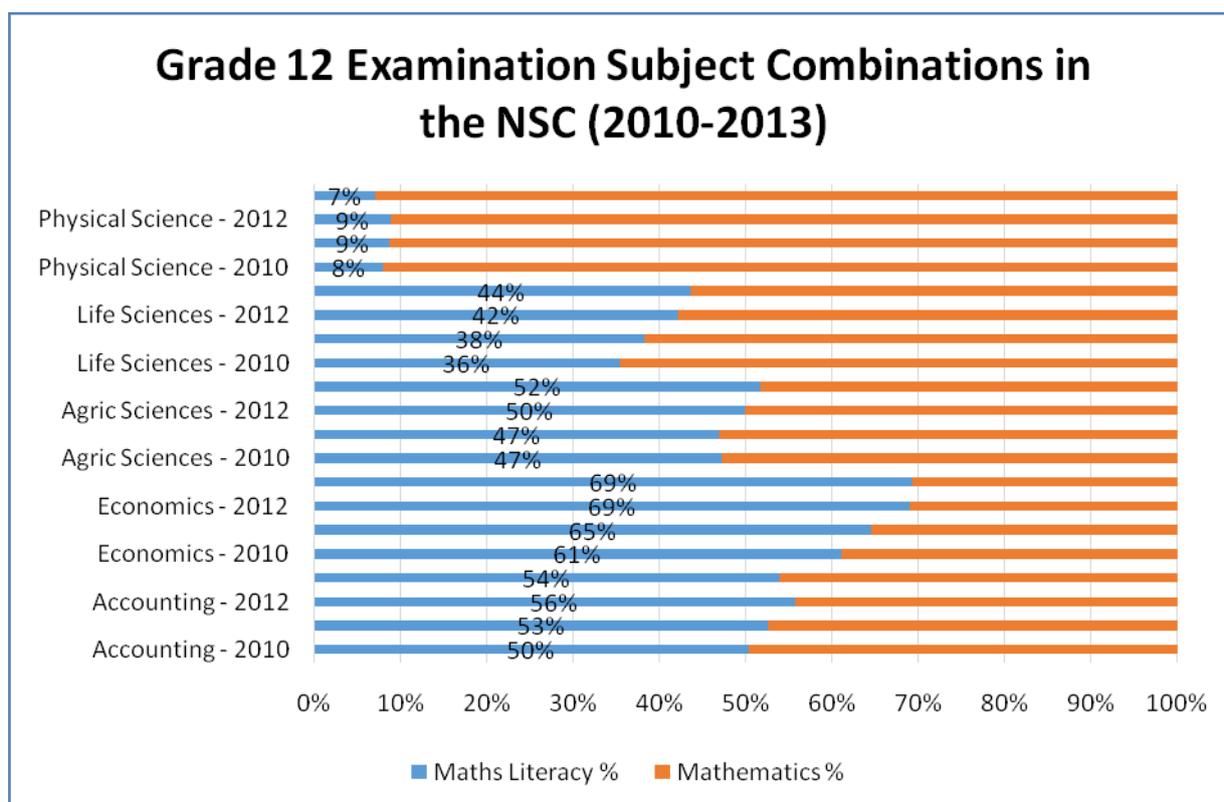


Figure 2.4: NSC examination Mathematics and Mathematical Literacy taken with selected subject combinations

This troubling pattern of large numbers of learners taking Mathematical Literacy with subjects like Life Sciences, Accounting and Economics has continued and even increased in some areas. Figures for 2013 in Figure 2.5 reveal the extent of this problem.

Year 2013	Mathematical Literacy	Physical Sciences	Life Sciences	Agricultural Sciences	Economics	Accounting
Total No. that wrote	324 097	184 383	301 718	83 437	150 114	145 427
No. that wrote ML with Subjects	324 097	13 135	131 592	43 128	103 993	78 376

Figure 2.5: Number of learners that wrote Mathematical Literacy with selected subjects in 2013

One of the consequences of not choosing Mathematics is that learners may achieve 'Bachelor' or 'Diploma' passes but still not satisfy the requirements for admission to the programmes of their choice. Another problem, both at school and in further education, is that students lack the foundation that the subject of Mathematics provides for other subjects they are taking in school or need to take in further studies, and this impacts their success rates.

We therefore recommend that a national policy or strategy be developed to require learners to take Mathematics with (selected) Science subjects and when taking a combination of Economics and Accounting.

Subject combinations should be stipulated in a national curriculum regulatory framework or policy. At the very least some clear directive from national and provincial education departments should strongly encourage this. Some provinces have already begun to do this, especially with Physical Science in Dinaledi Schools.

In conclusion, a major effect that the introduction of such compulsory subject combinations is expected to have is an increased proportion enrolling for Mathematics for sound educational reasons. It may be necessary to phase in such a requirement over a few years to avoid unintended consequences such as a decline in overall enrolments in science-related subjects.

A related problem that is acknowledged and will impact the above recommendation is that the education system inherited from its Apartheid predecessor a situation of large numbers of schools not offering mathematics at all or only offering the previous SG Mathematics.

This was especially so in African schools. By 2004, 3 385 schools offered both HG and SG Mathematics, 2 575 schools offered only SG Mathematics, 59 schools offered only HG Mathematics, while 112 high schools offered no Mathematics at all at Senior Certificate level. Of those that offered Mathematics, only 57% offered HG Mathematics. The schools best positioned to perform well in the new NSC Mathematics were those that offered HG Mathematics, given its closer alignment (than SG Mathematics) with the NSC Mathematics. Research shows that the schools that offered SG Mathematics only or no mathematics were predominantly African schools and those serving poor learners, significant implications for (in) equity in both access to Mathematics and in performance outcomes. These challenges are explored in several chapters in Reddy (2006) *Marking Matric: Colloquium Proceedings*.

A worrying trend highlighted in DBE data is that, since the introduction of NSC Mathematics in 2008, the number of schools not offering Mathematics in the NSC has steadily increased. It has almost doubled (90.7% increase). In 2008, only 150 schools did not offer Mathematics. In 2013 this figure had risen to 286 (see Figure 2.6).

We therefore, recommend that all Schools be required to offer Mathematics (and Mathematical Literacy) and that they be adequately enabled and resourced to do so. In this way, all learners will have an opportunity to learn and succeed in Mathematics.

Province	2008	2009	2010	2011	2012
EC	27	32	33	35	41
FS	11	14	13	16	9
GA	16	21	22	26	26
KZ	31	36	36	49	61
LP	24	38	48	57	74
MP	8	8	10	9	10
NW	4	7	8	14	17
NC	9	11	7	12	12
WC	20	23	26	33	36
National	150	190	203	251	286

Figure 2.6: Number of Schools NOT offering Mathematics by Provinces

Such a decision would have to be accompanied by a concerted effort at provisioning to support all schools to employ or develop competent Mathematics teachers. In particular, the large number of schools who previously offered only SG Mathematics with teachers who were significantly underprepared must be acknowledged and addressed systematically. The

residual inadequacies of Apartheid teacher education and the higher demands of the new NSC Mathematics curriculum together point to the extent and depth of teacher development and knowledge needed if the subject is to be competently taught, doing justice to its new content topics and pedagogy. The answer does not lie in making the Mathematics curriculum easier. Teachers must be supported to rise to the challenge of delivering CAPS. (This has relevance for a later recommendation on the matter of a “middle Mathematics” between Mathematical Literacy and Mathematics.)

Much will need to be done to move the media focus from simple pass rates to a broader range of success indicators by which learners, teachers and schools should be valued and recognised. This will help stem the tide of increasing numbers of learners opting not to take Mathematics or being forced not to do so in order to improve their and their schools’ pass rates. In conclusion, ensuring that all schools offer Mathematics is important for opening access to Mathematics for all learners, thereby securing their future work and study opportunities and meeting national needs.

5. MATHEMATICS IN THE NSC

Media reports and submissions to the Ministerial Committee raised a number of issues in respect of Mathematics. These may be summarised as follows:

- (a) Declining enrolments;
- (b) Poor performance of learners in Mathematics at all levels of the education system;
- (c) Small numbers passing at higher levels, especially in Grade 12;
- (d) Mathematics is difficult and abstract;
- (e) Inadequacy of many teachers’ knowledge of and capacity to teach Mathematics;
- (f) Inadequacy of learner preparation at lower grades for higher grades and life beyond schooling;
- (g) Lack of materials and conditions for optimal teaching and learning, and
- (h) Need for further differentiation or a new subject between Mathematical Literacy and the current subject of Mathematics.

All bar the last issue are covered in other parts of this report. To address the last issue, which the committee’s terms of reference describe as *the possibility of introducing another level of Mathematics*, it is necessary to reflect on the historical circumstances that led to the

current curricula and remind ourselves of the lessons learnt from the HG and SG Mathematics that preceded them. In the period 1995 to 2007 (the year before the new Mathematics examination was written for the first time in Grade 12), the number of learners taking Mathematics (HG plus SG) rose by 73% (to 347 570). However, while the number of learners choosing SG more than doubled, increasing by 124% (from 134 828 to 301 445), the number taking HG Mathematics declined by 30% (from 65 616 to 46 125 learners).

The obvious and strong lesson from this is that learners gravitate to what is perceived or experienced to be the easier mathematics option when allowed to do so, with support from teachers and schools. The rising Mathematical Literacy enrolment provides further direct evidence for this important point. The question for those advocating the (re)introduction of a third option between Mathematics and Mathematical Literacy is: How will this phenomenon of large numbers choosing what is seen to be the easier option be avoided if such an option is provided? This question is especially important in view of national targets set for mathematics and science post-school access and outputs. During the oral submissions the question of a third option was explicitly engaged. It was also examined carefully in the written submissions received. Views on the matter are divided, with approximately half in support and half against, even among experts. This was also the case from a review of the previous reports commissioned by DBE (and DoE).

The performance outcomes of the Mathematics curricula have been a recurrent concern from the past SC to the current NSC. While comparisons between the previous HG and SG Mathematics and NSC Mathematics are difficult to make, given the considerable differences between the curricula, some conclusions can cautiously be drawn, especially in respect of the quantitative outputs of the system which should meet national Science, Technology, Engineering and Mathematics (STEM) needs and demands. Figure 2.7 provides a descriptive visual over a 12-year period, showing numbers of HG and SG learners who wrote and passed Mathematics at 40%+ for HG and at 33.3%+ for SG from 2002 to 2007, against numbers of learners who performed at each of 30%, 40%, 50% and 60% and above in NSC Mathematics from 2008 to 2013. Both these are plotted on the same axis to facilitate a comparative longitudinal overview. The numbers taking the Grade 12 examination in each year are also given as an indication of context.

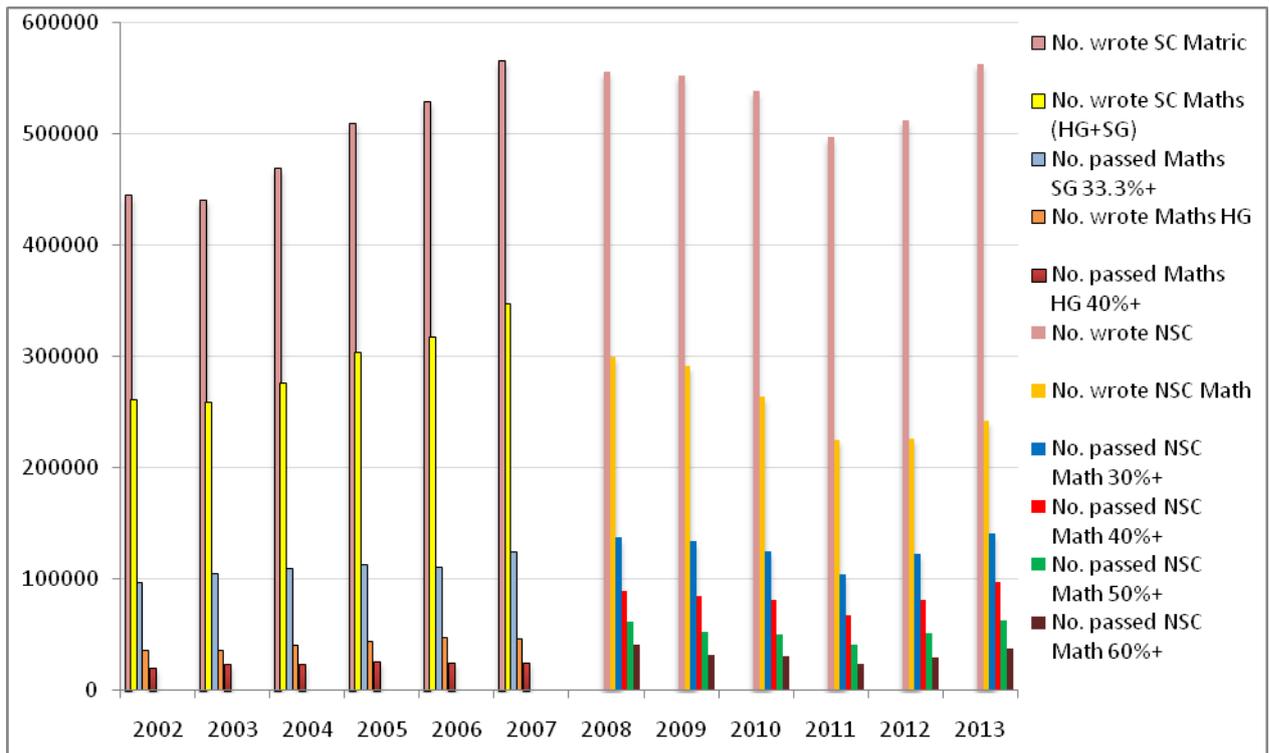


Figure 2.7: Mathematics Curricula Performance Outcomes: Old SC versus New NSC

This sheds light on whether the NSC Mathematics is differentiating by assessment as was envisaged when a single Mathematics was introduced; and what relationship, if any, there is to the previous HG and SG performance outcomes.

The numbers of learners who passed Mathematics on the HG at 40% and above (the previous minimum entry into STEM degrees) each year in the 6-year period between 2002 and 2007, varied between 20 528 and 26 383, with an average of 24 183. By contrast, in the 6-year period between 2008 and 2012, the number passing NSC Mathematics at 60% and above (often the new minimum for entry into STEM degrees) ranged between 24 577 and 41 667, with an average of 32 777 passes at this level. The number of learners who passed SG Mathematics at 33.3% and above over the period of 2002 to 2007 ranged between 96 302 and 123 813 with an average of 115 536 learners. In comparison with these SG passes, the number passing NSC Mathematics at 30% or more between 2008 and 2013 has varied between 104 033 and 142 666 learners with an average of 126 844 passes, (and the number passing at 40% and higher has varied between 67 592 and 97 748). Notwithstanding the significant qualitative differences between the past SC Mathematics and the current NSC Mathematics curriculum, this quantitative comparison of the output of the school Mathematics curriculum makes visible the trends and changes in the actual numbers of learners passing at different levels that provide access to further study opportunities.

These comparisons are also alluded to in the media reports studied and the submissions made to the Ministerial Committee. Hence, this data provides evidence for a discussion about the gains and losses in moving from the old to the new Mathematics curriculum.

Early comparisons between the old SC Mathematics HG and SG with the new NSC Mathematics in terms of curricula and standard of examinations in 2008 by Umalusi (2009) found that the NSC curricula were of much the same standard as the NATED 550 HG curricula but that generally the first set of exams appeared to be pitched midway between HG and SG. From another perspective, a statistical analysis has demonstrated a correspondence between a HG Mathematics pass of 40% in 2007 and an NSC Mathematics pass of 56% in 2008 (Simkins 2010).

The conclusion we draw from this is that the close similarity in the patterns of performance at comparable levels (Figure 2.7) suggests that NSC Mathematics is differentiating by assessment and further that it is doing so in much the same way as the previous HG and SG Mathematics did.

Arguably, the outcomes of Mathematics curricula are still experienced in the same way by learners in terms of their further study and work opportunities. Comparing how NSC Mathematics entry requirement levels for further study at University are pegged in relation to the levels required previously in HG and SG Mathematics provides another vantage point from which to relate the old SC Mathematics to NSC Mathematics. From a review of minimum requirements, for example, in the BSc degree in several universities, it appears that current Mathematics requirements are set approximately 1 or 2 levels higher than past requirements on HG (that is a minimum previous pass requirement of HG 40% or 50% is now 50% or 60% respectively or even 70%). This reflects an aspect noted in some international benchmarking reports commissioned by DBE, that while the NSC Grade 12 (2010) Mathematics content and examination standards that can be achieved in the common areas are similar, the Mathematics courses against which the NSC Mathematics was benchmarked contain topics that reach a higher level of abstraction. The introduction of CAPS will go some way toward improving this situation.

Our conclusion is that some gains have been made in the numbers passing at the 60%+ level (compared to HG) and at 30/40%+ levels (compared to SG) in the NSC Mathematics, but the patterns of performance outcomes have remained remarkably resistant to change despite the curriculum reforms in Mathematics. The main shift has been in slightly higher

numbers passing Mathematics and it appears that marginally higher new ceilings have been created.

A major factor is almost certainly the number of African learners taking and passing Mathematics. This has remained hidden from public scrutiny since the introduction of the new NSC Mathematics. Data for the period 1999 to 2005 shows that the number of African learners who wrote Mathematics HG remained below 25 000 per annum while the number that passed HG increased from about 2 900 (12%) in 1999 to 9 900 (40%) in 2005 (Kahn 2005; 2007). Earlier analyses examining the intersection of race and gender showed that African females were the most disadvantaged in terms of mathematics learning outcomes (e.g. CDE 2004, Reddy 2006). DBE (like its predecessor, DoE) releases Education Statistics (accessed at <http://www.education.gov.za/EMIS/StatisticalPublications/tabid/462/Default.aspx>) each year, providing gender statistics for Grade 12 NSC participation and performance but giving no race data.

The question of what numbers of African learners take and pass NSC Mathematics at the different levels needs to be tracked, investigated and intersected with a gender analysis. This is necessary for systematic attention to be paid to overcoming factors inhibiting African learners, in general, and African females in particular, from realising their full Mathematics performance potential. While we concede that categories of race risk entrenching apartheid descriptions, research in the area cited above suggests that race, gender and socio-economic background remain relevant to unmasking and acting on the deep inequalities that persist in the education system.

The concern of those arguing for some 'middle level' Mathematics option is understandable, given the key role Mathematics plays as both a gateway and a gatekeeper. However, after analysis of the available information, we cannot support introducing such an option since it would most likely return the education system to the problems of the previous HG/SG Mathematics and have a significant adverse impact on any chance of meeting the DBE and NDP goals and targets in Mathematics participation and performance. There is no easy answer. Mathematics is by most accounts seen and experienced as a difficult and demanding subject. It certainly requires hard work, persistence, and dedication.

Our conclusion, as we have shown, is that no amount of curriculum change (e.g. inserting another level of Mathematics) will increase Mathematics learning outcomes in real terms. Any systemic improvements in Mathematics learning outcomes depend on strong

commitment by all parts and levels of the system and by individuals. The system needs to support teachers and learners in their on-going efforts to master the subject. In short, effective implementation of curricula in classrooms is critical.

In view of our first strong recommendation that no further curriculum changes be made for at least eight to ten years, and in the light of the analysis presented above, **we recommend that the demand for differentiation in the Mathematics curriculum be addressed in terms of changes in the examination and assessment of the subject** rather than through introducing another Mathematics curriculum. Such changes must allow for differentiation through learner outcomes, providing more information for better connection to subject choices in the FET band that link more directly to Mathematics requirements in future work and further study.

We recommend that the Mathematics curriculum be examined through three papers, which separate the subject into different topic/content combinations and sets of desired learning outcomes. In addition to releasing the overall Mathematics results for each student, **it is recommended that results be released for each paper.** The structure and content of each paper will need to be carefully considered and clearly differentiated as will the issues of standardisation of the results of each paper and the composite Mathematics subject.

This will provide more information to inform decisions about access to further study and work opportunities. It is likely to enhance access. This recommendation moves away from *differentiation by levels* (such as a 'middle level' Mathematics) to *differentiation by kinds of mathematics* – areas and topics – linked to future needs. For example, by placing mathematical content and outcomes aligned to Economics and Health Sciences in one paper, and those aligned to Engineering and Mathematical Sciences in another, a learner who may have a relatively low overall result in Mathematics but a high score in a paper relevant to a particular programme, could gain access to that programme or a related work opportunity. There are international exemplars that could be drawn on for the South African context. For example the Australian Senior Secondary Curriculum offers four types of mathematics including one in which calculus and statistics are combined (<http://www.australiancurriculum.edu.au/SeniorSecondary/mathematics/mathematical-methods/RationaleAims>).

The implications for the NSC examination system will require further discussion on examination processing and releasing of marks on the part of Umalusi and DBE. However, a

precedent has been set in releasing paper 3 marks separately. To achieve its goals, such a move will also require higher and further education to review their admission criteria and procedures, improving access for students in ways that are likely to enhance their success. In the same spirit, the recent Council on Higher Education proposal to extend the undergraduate curriculum by one year (CHE, 2013) opens up an opportunity for higher education to share the responsibility of preparing learners in Mathematics in more direct ways that are relevant to their programmes.

In several educational systems in which Mathematics is offered in the interface between secondary schooling and higher education, students can, for example, take separate courses in Algebra, Statistics or Calculus. In the next round of curriculum reforms of Mathematics to be undertaken in South Africa after CAPS has been in place for the next eight to ten years, this may well be the approach that should be considered. However, a cautionary note is necessary. We reviewed DBE/Umalusi reports that compare senior secondary mathematics curricula of several countries, and note the difficulty in making these comparisons, since the mathematics curricula offered across countries are contextualised and offered in different educational pathways and combinations and at different system levels.

6. TECHNICAL/VOCATIONAL MATHEMATICS AND PATHWAY

The high attrition of learners in the FET band from Grades 10 to 12 is well known and has been analysed (See chapter 5). Clearly, a well-defined alternative pathway that captures those who, for various reasons, are unable or unwilling to continue to complete their NSC is long overdue.

The recently released White Paper for Post-School Education and Training (DHET 2013) highlights the need for significant growth in the FET College sector. To achieve this, much more needs to be done actively to direct those learners who drop out or are at risk of dropping out of the schooling system between Grades 10 to 12 onto an alternative pathway towards a technical, vocational or artisan career. It is in this context that a completely different kind of Mathematics curriculum should be developed interfacing with the FET College sector and the world of work.

We recommend that **an alternative vocational/technical pathway** (directly and strongly articulated with FET Colleges) **be developed in the FET Grade 10-12 band offering a**

vocational/technical Mathematics closely aligned with vocational, artisan and technical programmes and work contexts.

The curriculum needs to be reconceptualised for this purpose. Neither the recently developed Technical Mathematics curriculum nor the existing Mathematics curriculum in the NCV is adequate to the task. The Technical Mathematics curriculum developed for Technical Schools appears to be taking its point of departure from the NSC Mathematics curriculum, harking back to the old HG/SG Mathematics approach. Similarly, the Technical Mathematics Curriculum Statement is taken almost verbatim from CAPS with minor variations. Some topics from CAPS have been omitted and some topics are new, notably complex numbers and radian measure, and an attempt is made at including 'technical' topics, but for the most part, the examples are not very different from those found in CAPS.

The new Technical Mathematics curriculum should not be introduced across the schooling system. This would be a retrogressive step and would be unlikely to improve Mathematics learning outcomes in real terms. Rather a completely different Mathematics curriculum should be developed with a much stronger technical/vocational application and 'mathematical user' orientation for introduction solely in a technical/vocational pathway of the schooling system. It should be directly relevant in content, level and outcomes to the needs of FET Colleges, technical schools and vocational programmes and to the careers and work contexts to which they open access.

It is also our view that the content prescribed in the Mathematics curriculum for NCV2, NCV3 and NCV4 in the FET Colleges seems to be rather abstract and advanced for a technical/vocational track and may therefore also not be appropriate in the FET band of the school system.

We recommend therefore that more research and international benchmarking be undertaken to design an appropriate kind of Mathematics curriculum that could authentically and realistically serve learners taking the range of vocational/technical subjects.

In conclusion, we strongly urge those developing mathematics curricula not to address too diverse a range of goals through a single curriculum. Focus is necessary if proper justice is to be done to mathematical learning needs.

7. EDUCATION SYSTEM IMPLICATIONS

The implications of what we have set out so far lead to further recommendations. Our key recommendation, that the major focus for the next eight years should be on the systematic and well-supported implementation of the official (CAPS) Mathematics and Mathematical Literacy curriculum leads to three important system implications, each requiring systematic attention.

The first and core implication of our recommendations is that all **teachers of mathematics must have adequate knowledge and skills to teach Mathematics well and realise the potential of CAPS**, that much is widely agreed. It was strongly expressed throughout the submissions received by the Ministerial Committee and in media reports. It is also an enduring concern in reports such as the *Investigation into the implementation of Maths, Science and Technology report* (DBE 2013) and the *Integrated Strategic Planning Framework for Teacher Education and Development in South Africa*, with the latter calling for the development of “Norms and standards ... to ensure that... teachers qualified in particular subjects, learning areas and phases do in fact teach those subjects, learning areas and phases (and only those)” (DHET 2011, 45).

This would make for more efficient utilisation of both new and existing teachers. Furthermore, this DHET report and others (e.g. Spaul 2013 and NEEDU 2013) have made the case for system-wide teacher testing. Because of our concern that teachers be competent, we wish to emphasise that **teacher development opportunities must be linked with teacher testing and placement**. That is, following development programme participation, teachers must be tested to assess their level of competence. Based on this evaluation they should be matched and placed to teach Mathematics at the grade levels for which they have demonstrated adequate knowledge and skills.

Research on teacher knowledge in South Africa has long shown that significant numbers of teachers do not have both adequate personal knowledge of mathematics, and mathematical teaching knowledge, for the levels at which they are teaching. Although huge investments have been made in teacher development programmes, and more will be required, participation and even certification in these have not necessarily succeeded in enabling teachers to acquire the requisite Mathematics competence; nor have they been followed by efforts to deploy teachers appropriately in the system.

In several Asian countries teachers are routinely tested before they are employed, and several excellent examples are available of tests that assess both teachers' own knowledge of mathematics, and their mathematical knowledge for teaching (pedagogical content knowledge) (Leung et al. 2012). Given the shortage of teachers, it is important that such a process does not lead to teacher attrition but rather that mechanisms be found to enable schools to place teachers in grades in which they have been objectively found to be able to teach the mathematics content. Given the well-researched finding that the single most important factor in improving learning outcomes is the quality of the teacher, this one intervention, if systematically implemented across the entire system, could result in a marked change in learner performance.

The rapid and repeated curriculum changes have negatively impacted a second important aspect: the quality of teaching and learning materials in mathematics. In past cycles of curriculum reform, textbooks and learning materials were produced under pressure. Not surprisingly, they contain errors and inaccuracies which would not have been there if they had undergone the normal rigorous review processes. By stabilising CAPS over the next 8 to 10 years, quality materials can be produced that are commensurate with the goals and standards in the Mathematics and Mathematical Literacy curricula. Moreover, every teacher and learner must have the required textbooks and materials. This is essential in mathematics teaching and learning so that multiple examples and problems can be worked through in class and by learners on their own – a bedrock of all mathematics teaching and learning.

National and international tests and assessments, and studies on schools, teachers and learners have identified key aspects that require focus and improvement. Chief among these is **the need for teachers and learners to meet the time on task and assessment standards** (Simkins 2013) and other requirements in the curriculum – a third significant system implication. For example, the amount of writing that learners are doing in their workbooks has been found to be uneven (NEEDU 2013) and significantly below norms and benchmarks of other countries.

In conclusion, those who successfully teach and learn mathematics know that there is no hidden secret, quick fix or magic bullet. Doing well in mathematics requires consistent effort, and demands that all parts of the system work and all participants play their roles to the best of their ability. Co-ordinated and sustainable interventions that leverage greatest gains across all levels will yield enduring mathematics learning outcomes into the future.

8. SUMMARY OF RECOMMENDATIONS

The Ministerial Committee recommends that:

- 8.1 **CAPS be implemented for the next eight to ten years without any further curriculum policy changes.** That is, no changes should be made in the official Mathematics curriculum for that period, so that the full focus and resources of national and provincial departments of education can be concentrated on improving all aspects of implementation of CAPS at all levels of the education system. *The Ministerial Committee considers this strong, principled recommendation, based on the experience of the past six years, to be key to improvement.*
- 8.2 **The Mathematical Literacy curriculum be retained as reformed in CAPS, but that the curriculum policy intentions and the enhancements in implementation be significantly strengthened,** especially as these relate to quality of teaching, assessment and examinations. This will go a long way towards overcoming negative perceptions and improving the credibility and acceptance of Mathematical Literacy as an important subject in its own right and for further study and work opportunities.
- 8.3 **A national information awareness campaign about the value, place and role of Mathematics and Mathematical Literacy as distinct subjects in the NSC be launched both in schools and in the communities that schools serve.** This would promote informed subject selection.
- 8.4 **As a matter of national policy learners be required to take Mathematics with (selected) Science subjects and also when taking a combination of Economics and Accounting.** Subject combinations should be stipulated in a national curriculum regulatory framework, or promoted by clear directives from national and provincial education departments.
- 8.5 **All schools be required to offer Mathematics and be enabled and adequately resourced to do so.** Currently increasing numbers of schools are choosing not to offer NSC Mathematics to their learners, denying them an opportunity to access and learn Mathematics.

8.6 The demand for differentiation in the Mathematics curriculum be addressed in terms of changes in the examination and assessment of the subject. In particular, the Ministerial Committee recommends that:

8.6.1 The Mathematics curriculum be examined through three papers, which divide the subject into different topic/content combinations and sets of desired learning outcomes, linked to different career and study opportunities This is a much more promising and practicable option than introducing another Mathematics curriculum between Mathematical Literacy and Mathematics.

8.6.2 Each learner receives the results of each paper as well as the overall Mathematics results. This will enhance access and provide more information about mathematical competences for further study and work opportunities.

8.7 An alternative vocational/technical pathway (directly and sharply articulated with FET Colleges) be developed in the FET Grade 10-12 band offering a different vocational/technical Mathematics closely aligned with vocational, artisanal and technical programmes and work contexts. The new 'Technical Mathematics', referenced against the Mathematics CAPS curriculum, should not be introduced across all schools, both as it will regress the education system (as did Standard Grade Mathematics in the old SC), and as it is unlikely to improve Mathematics learning outcomes in real and relevant terms.

8.8 All teachers of Mathematics have adequate knowledge and skills to teach the subject well and deliver on CAPS. This is widely recognised as a challenge, and will require significant and sustained teacher development opportunities.

8.9 Teacher development opportunities be made available on an appropriate scale and be linked with teacher testing and placement. Following development programme participation, teachers must be tested to assess both their level of mathematical knowledge and their knowledge for teaching mathematics. Based on this evaluation they must be matched and placed to teach Mathematics at the grade levels for which they have demonstrated adequate competence.

CHAPTER 3

LANGUAGE OF LEARNING AND TEACHING AND ENGLISH AS FIRST ADDITIONAL LANGUAGE

INTRODUCTION

This chapter addresses one of the main criticisms of the NSC (see Terms of Reference in the Executive Summary) and discusses a key factor affecting the standard and quality of the NSC: the Language of Learning and Teaching (LOLT) with a specific focus on English First Additional Language (EFAL).

Deciding on the most effective Language of Learning and Teaching (LOLT) and preparing teachers to use it well are complex challenges in South Africa, not least because of the implications for the economy and particularly for higher education. This is a difficult and contentious issue, not only in South Africa but internationally, as explored in the 2014 *Review of Research in Education* on the theme “Language policy, politics and diversity in education.” Articles in the volume; focus on the rights of individuals to be accommodated in their mother tongue in their learning experience; the pragmatic need to access and participate in the dominant society; and understanding the effects of world culture necessitated by the intrusion of the global economy and dominant languages (Wiley et al. 2014, viii-ix). World-wide this is a challenge given more than 7000 living languages, of which more than 2000 are in Africa (Wiley et al. 2014, x).

Research on student performance at South African universities suggests that learner success in the language used for learning and teaching at school is a good predictor of success in higher education programmes (Wedekind 2013). However, fewer than half of beginning first year students tested on the National Benchmark Test across a range of universities were deemed proficient in terms of academic literacy. This suggests that school-leavers with good results from the National Senior Certificate were nonetheless not well prepared for higher education study (Wedekind 2013).

One of the central factors in poor performance in the NSC and beyond is the inadequate language competence of the learners concerned (Wedekind 2013). Prior to the implementation of the NSC, learners doing English Second Language in the Senior

Certificate, whilst the largest number of registrations, had very low performance, and levels of achievement had not changed over many years (Ministerial Committee 1998, Umalusi 2004 in Lolwana undated). In interpreting this fact, Lolwana (undated, 6) observes that low competencies *were not the sole preserve of the learners* and that it was *safe to assume that teachers also do not command the required competencies in the use of the medium of instruction*. She further observes *that the problem did not seem to be getting attention anywhere in the system, and **this was perhaps the biggest crisis in our system, particularly for success at university***".

The majority of children (more than 80%) at South African secondary schools learn through a language medium that is not their first language. Whilst the Constitution recognises 11 official languages, two of these, Afrikaans and English, are used as LOLT in secondary schoolsⁱ. For the majority of learners this is formally a submersionⁱⁱ strategy where they are supposed to work solely in a language other than their own, although in reality it is more like immersion bilingualⁱⁱⁱ (even multilingual) education, with the teachers mediating between the languages. South Africa is not unique in this regard. Many, perhaps most countries experience challenging situations where the learner's home language and the language of learning and teaching are not the same (Garcia and Baker 1995). Currently English is only the third most widely spoken language^{iv} but is the language found in the most countries (101 countries and spoken by more than 335 million speakers) (Wiley et al. 2014, xii). South Africa, however, is one of the most diverse in terms of linguistic diversity of countries (0.87). It is third behind Kenya (.93) and India (.92) with a total of 44 living languages of which 28 are of indigenous origin (Wiley et al. 2014, xv).

In the South African environment, English fulfils two specific roles:

- (a) As the subject English, where it is presented as the medium of "communicative competence in multilingual and multicultural life worlds and worlds of work" (Umalusi 2013a, 1),
- (b) As the Language of Learning and Teaching for 80% of the learners, it also serves as a means of "preparation for academic learning across the curriculum" (Umalusi 2013a, 1).

The question has been raised as to whether English First Additional Language is adequate for both purposes (Umalusi 2013a). Internationally, there is no one version of school English

and Christie and Macken-Horarik (in Umalusi 2013a, 2) categorise six different specialisations of English.

The South African Curriculum and Assessment Policy Statements (DBE 2011a^v) present one of the purposes of **English Home Language** as: “Acquire the language skills required for academic learning across the curriculum”, with the parallel purpose for **English First Additional Language** as: “Use their Additional Language for academic learning across the curriculum.” At first sight, there appears to be little difference between the two. However, implicit in EFAL being used, is that learners first have to acquire the necessary skills in it. This ambiguity exacerbates the problem of distinguishing between the language levels in teaching and learning and assessing them appropriately.

For this reason, EFAL does not and cannot fulfil the same purpose in the curriculum as the other 10 First Additional languages. In essence, EFAL is unique. It fulfils two distinct, mutually exclusive purposes, namely English as a language of learning and teaching (for 80% of learners), and English for the purposes of communication. Despite the status of Afrikaans as a LOLT, Afrikaans FAL does not play that role as learners whose Home Language is not English or Afrikaans almost always choose English as their LOLT. The expectation within our curriculum that all FAL curricula and examinations should be comparable becomes a problem, as to reduce EFAL to the “true” level of a first additional language perpetuates the inadequacies currently experienced in the Learning and Teaching across the curriculum. It is therefore important to recognise the uniqueness of EFAL both in the curriculum and in the examination of the subject.

Much has been written about bilingual education and its value and challenges (Baker 1996). In South Africa, there has been an attempt to encourage the society to extend this idea and embrace multilingual education. However, for several reasons, not much progress has been made. (1) Trying to implement 11 official languages simultaneously with inadequate resources has resulted in lack of focus and a fair measure of unprofitable contestation. (2) A number of African languages remain under-developed with the bodies charged with their development making slow progress for financial and administrative reasons. This constitutes a challenge for implementing a multilingual policy in education. (3) The reality for the world of business, government and much of higher education is that English predominates, with the result that parents increasingly strive to achieve opportunities for their children to learn in English and achieve real competence in the language. (4) While state policy prescribes home language learning for grades R to 3, and multilingual education thereafter, recent data

from PIRLS 2006 and 2011 reveals that only about 60% of learners in fact receive this opportunity and learn in their home language in Grades 1-3.

The consequence of the tension mentioned above and of the uneven implementation of effective language education is that the majority of learners are “semi-lingual” rather than competently bilingual or multilingual in listening, speaking, reading and writing in English and another language or languages. Such learners are not adequately proficient in any language. They display “small vocabularies, incorrect grammar, consciously think about their language production, are stilted and uncreative with each language and find it difficult to think and express emotions in either language” (Baker 1996, 9). This description is consistent with what markers, teachers and external assessments over the past decade have highlighted, as well as what published research has repeatedly claimed (Howie et al, 2009, 2012). The term “semi-lingual” may suggest a deficit approach. As such it does attract some resistance (Baker 1996). However, it is substantially true. The majority of South African learners’ lack the language proficiency that they need.

It is now necessary to discuss the current situation regarding EFAL and the NSC more closely.

1. THE CURRENT SITUATION: 80% ENGLISH FIRST ADDITIONAL LANGUAGE, 20% ENGLISH HOME LANGUAGE

In Grade 12, languages are taught for nine hours per week in total: Home Language receives 4.5 hours of instruction as does the First Additional Language (DBE 2011: 28).

Currently, the requirements stipulate:

Learners must take two official languages provided that one of the two official languages is offered on the Home Language level, and the other on either Home Language or First Additional Language level, and provided further that one of the two languages is the language of learning and teaching (DBE 2011, 19).

As we have noted, the LOLT at NSC level is either English or Afrikaans. In reality, this means that the majority of the learners will take English as First Additional Language. In 2013, 568 708 learners enrolled for the NSC and 80% of these took English First Additional Language.

Four times as many candidates enrol for EFAL as do for English Home Language. This makes it imperative that learners who take English on this level should be adequately equipped (a) for learning through the medium of English, (b) to deal with the challenges of communication in the workplace environment, given the role of English as the main language of business and government, and (c) to undertake higher education, where English is the language of learning and teaching at most institutions.

Language at First Additional level	% of total enrolment	Number enrolled in 2013	% at 30% and above	% at 40% and above
English	79.94%	454 666	98.9	88.7

Figure 3.1 Enrolments and achievements in EFAL in 2013 (Data: Umalusi)

The percentage of learners taking EFAL has been stable at about 80% of those enrolled for the NSC over the past four years (see Table 2). However, the percentage of learners attaining 30% and above has increased significantly over the past four years (from 94.5-98.8%). It has increased even more on the raw scores (91.5-97.8%). Likewise there has been an increase in the proportion passing at 40% and above: 71.3%–88.7%, which is a considerable increase (17%) in the short time period. The raw scores increased by 20% in this period.

Language at First Additional level	N	Total enrolment	% of total enrolled	Raw % at 30% and above	Final at 30% and above	Raw at 40% and above	Final at 40% and above
2010	449080	559166	80.3	91.5	94.5	65.8	71.3
2011	414480	511259	81.1	93.9	96.2	71.0	76.1
2012	420039	527335	79.6	96.3	97.9	78.2	82.9
2013	454666	576490	79.9	97.8	98.8	85.0	88.7

Note: percentages are rounded off to one decimal point.

Figure 3.2 Trends in English First Additional Language (Data: Umalusi)

The importance of EFAL, taken by 80% of the enrolment, is further emphasised by comparison with other First Additional Languages taken for the NSC (see Figure 3.3). The second largest group are enrolled for Afrikaans (15%), followed by isiZulu (2.7%) whilst the smallest group is isiNdebele with only 23 enrolments (a minute fraction of 1%)

First Additional Language	Number enrolled 2013	% enrolled in 2013	% at 30% and above Raw marks	% at 40% and above Raw marks	% at 50% and above Raw marks
Afrikaans	87890	15	90.23	75.44	58.07
English	454 666	79.9	97.81	84.97	56.23
isiZulu	15343	2.7	99.22	98.39	96.69
isiNdebele	23	0.004	100	100	91.30

Figure 3.3 Enrolments in First additional languages in 2013 (Data: Umalusi)

In the NSC examinations, EFAL is assessed across three papers:

Papers	Topics	Marks
Paper 1	Comprehension Summary Language	80
Paper 2	Novel Drama Short Stories Poetry	70
Paper 3	Essay Longer transactional text Shorter transactional text	100

The papers assess a variety of topics and genres. However, the ambiguity (mentioned previously) about the role and purpose of EFAL and its uniqueness is also reflected in the papers. This can be seen in the critique of the papers which is discussed in the following section. It arises not only nationally, but also from the international benchmarking process of selected examination papers from 2012 and 2010 (see chapter 7).

2. EVIDENCE OF LOW LEVELS OF PROFICIENCY IN HOME LANGUAGE AND EFAL

The situation regarding the level of learners' proficiency in all South African official languages is of concern at the primary school level, where there is external evidence of low levels of proficiency at Grades 4 and 5 (Progress in International Reading Literacy Study (PIRLS) 2006, 2011^{vi}) and Grade 6 (Southern African Consortium for the Monitoring of Educational Quality (SACMEQ) 2007). These studies reveal that South African learners are

approximately 2–4 years behind their peers internationally in reading literacy. Most were assessed in their home language and all 11 languages were assessed. Some evidence at the Grade 9 level, although not measured comparatively, gives cause for concern at low levels of proficiency in English^{vii}. The most recent National Education Evaluation and Development Unit (NEEDU) report comments on severe language difficulties in EFAL (NEEDU, 2013).

Given its central role in effective learning at school and in providing learners with access to Higher Education and the workplace, English LOLT has not received the required additional support in practice to assist learners to achieve appropriate levels of proficiency in English. This is exacerbated by the relatively low levels that EFAL is assessed at in keeping with its First Additional Language level. Interventions listed in the DBE's Evidence-Based report in 2013 were limited to "Band Aid" strategies of short term revision of examination papers, and road shows by provinces. Teacher subject content training in 2013 ranged from 2-3 hours (Eastern Cape, Free State, Gauteng, Kwazulu-Natal and Limpopo) to 0 hours (in Mpumalanga, North-West, Northern Cape, Western Cape). Based on this evidence, EFAL has not been given the priority required. However, it should be noted that a First Additional Language has been introduced in the primary school now from Grade 1 as from 2013. For many schools, that would mean that non-native English speakers are now exposed to English at a much earlier stage than previously. This appears a positive step towards extending the exposure time to English. However, unless teachers are adequately prepared to teach English as a First Additional Language, this opportunity may not be optimised.

Furthermore, the need for an effective intervention in primary and secondary schooling is a recurrent major theme in high-level reports, including the DBE's own annual diagnostic report, pointing to candidates' difficulties in writing the examination in a language other than their home language and their difficulty in interpreting questions and phrasing their responses. The 2012 subject reports for Business, Life Sciences and History state that, among other problems, a high proportion of learners are not able to cope with the demands of reading and writing that are an integral part of certain assessment activities. These reports are consistent with the concerns raised annually by Umalusi for more than five years, based on the comments of external moderators and chief markers.

Challenges include the following:

- (a) Language of learning and teaching (experienced by learners as) a barrier

- (b) Poor language grasp leading to (an) inability to interpret questions;
- (c) Poor understanding of (instructional) verbs like explain, discuss, compare, contrast, as used in assessment;
- (d) Inability to write a coherent and cohesive paragraph using evidence from the source (in the examination); and
- (e) Inability to write a coherent essay following a given instruction.

The same inadequacy in the literacy skills required to write proper paragraphs was noted across all subjects in the analysis of the 2011 Grade 12 results (DBE 2013b, 23).^{viii}

These challenges are often presented as major reasons why learners in South African schools perform so badly across all grades. In response, the Curriculum directorates within the DBE produced a strategy and a manual for teaching English Across the Curriculum. These were disseminated during the CAPS orientation in 2012 and 2013. At this stage it is not possible to evaluate the extent to which the strategy has been implemented. One can say, though, that the demands on learners in the 2012 examination papers for History and English were relatively high in terms of the amount (not cognitive demand) of reading required. For example, there were 10-14 unseen source texts to be read in History Paper 1 and Paper 2, totalling 2210-3094 words, and in English FAL Paper 1 the average number of words in the unseen sources was 1239, compared to 1494 in English Home Language Paper 1. ^{ix}(Umalusi 2013a, 3)

Despite the interventions, the 2013 reports from Umalusi after the standardisation process record no discernible improvement in EFAL, with evidence yet again of widespread problems with learners' reading and writing. Evidence has also emerged that the demands have been significantly reduced in examination papers for EFAL (in addition to other papers) because candidates' seem unable to cope with questions requiring critical thinking skills, particularly extended response questions. DBE quotes Umalusi as reporting:

a lack of linguistic skills required to express themselves in simple and proper paragraphs was evident in the responses of candidates across all subjects. Candidates displayed inadequacies regarding the skills of reading, comprehension and analysing, evaluating and applying information to either make decisions or solve problems (DBE 2013b, 26)

In relation to English First Additional Language, the following observations are made, based on the reports referenced:

- (a) South Africa is the only country to offer different courses for English “First” (Home) and “Second” (Additional) Language in countries in Africa where English is the Language of Learning and Teaching (Umalusi 2007; 2013b)^x. Other countries have opted to offer one compulsory course in English Language, including some literature, with a separate Literature in English course offered as an elective;
- (b) The multiple objectives of the three levels of English offered for the NSC may cause difficulties in the implementation of the curricula;
- (c) “Curriculum statements specify types of language use and types of textual resources, but give no indication as to the level of lexical density, complexity of structure, and adequate representivity in terms of the literature of English” (Umalusi 2013b, 6)^{xi}
- (d) The international benchmarking of the examination papers reported problems with equating the EFAL papers with courses offered by the Cambridge, New South Wales and Scottish authorities for examinations. No equivalent examinations are existed in these authorities.

The 2010 EFAL papers^{xii} were reviewed by international benchmarking authorities: Cambridge International Examinations (CIE), the Scottish Qualifications Authority (SQA) and the Board of Studies, New South Wales (NSW). Their critique was substantial, and they largely made similar points.

- (a) Whilst the papers appeared to be generally well structured and valid in terms of the content of the curriculum (NOTE: not all the benchmarking bodies were in agreement on the latter), there was a “reliance on testing memorisation and recall, rather than critical thinking and analytical and evaluation skills” (CIE).
- (b) “The cognitive levels assessed in the examination questions are heavily weighted towards lower-order skills. There are instances of gender-biased language and culturally-stereotyped images.”(NSW)

- (c) “There is greater emphasis on lower-order skills such as literal comprehension and grammar translation tasks than on higher-order cognitive levels of inference, evaluation and appreciation. When higher-order cognitive skills are addressed, either insufficient word length is allocated for students to demonstrate understanding or else mark weightings are too low.” (NSW)
- (d) “The majority of questions require short-answers (and not extended answers) and students can avoid writing an essay response in Paper 2.” (NSW)
- (e) “The grammatical activities themselves are meaningless and reflect a drill and practice approach to language learning which does not support the need to develop students’ language for work and participation in the broader community.” (NSW)
- (f) “Students are not given sufficient opportunity to explain and analyse the content, purpose and audience of the texts and this reflects the insufficient focus on critical literacy and language analysis skills across papers.” (NSW)

The Umalusi external moderator for EFAL reported that generally the papers were improving over time “with paper 1 in particular more taxing than 2012 and paper 2 and 3 compar[ing] favourably with 2012.” However, it was also noted that learners had problems with open-ended questions and that these questions presented a considerable marking problem:

- (a) Markers struggled with innovative responses in paper 2
- (b) Paper 3 marking was a serious problem – particularly in some provinces
- (c) Markers battled with interpretation of rubrics.

3. RECOMMENDATIONS

The following conclusions are drawn. A number of specific recommendations based on them then follow:

- (a) The level of most learners’ and teachers’ proficiency in English is too low to use English as LOLT optimally and so to realise learners’ potential.

- (b) Urgent and extensive interventions are needed to improve the level of English proficiency of most learners and teachers for whom English is a second language.
- (c) The promotion requirements should include an increase in the LOLT requirements to better prepare learners for entrance into higher education.
- (d) English as a First Additional Language is unlike the other 10 First Additional languages offered due to its central LOLT role and therefore should be taught and examined at a higher level to reflect its unique role.
- (e) Although there have been improvements in the papers over the past two years, the standard of the EFAL papers should continue to be raised and the critique of external evaluators addressed.

The significant and extensive problems across the curriculum as a result of many learners' proficiency levels in LOLT being too low to cope with the demands of the curriculum and the NSC examination make it necessary to pay special attention to teaching and examining the LOLT. The following specific recommendations are made:

- (a) **That the pass requirements for Language of Learning and Teaching (LOLT) be raised for all but the basic NSC** (see chapter 1 for an elaboration of all requirements):
 - (i) Pass requirements for the basic NSC remain as currently stipulated
 - (ii) Pass requirements for entry to higher certificate study
The LOLT must be passed at 40%.
 - (iii) Pass requirements for entry to diploma study
The LOLT must be passed at 50%.
 - (iv) Pass requirements for entry to degree study
The LOLT must be passed at 50%.

- (b) That recognition be given to the unique position of EFAL as the course supporting LOLT for 80% of learners, and that the standard of the English First Additional Language papers be raised accordingly, to be consistent with what is needed for effective implementation of the Language of Learning and Teaching and to equip learners adequately to meet the language competence requirements across the curriculum and post school.**

Following the recommendations of the international agencies used for benchmarking, the balance of the paper needs to be corrected by:

- (i) Using longer texts for comprehension.
- (ii) Raising the kinds and level of comprehension tested, significantly reducing the recall and retrieval items and including more application and inferential type questions.

Such a raising of the standard and associated expectations in the English First Additional Language papers would have a backwash effect through the system. This would lead to learners being better prepared to tackle language-rich subjects like History, Economics, and Life Sciences, in which many are currently unable to articulate and elaborate their answers in the constructed response questions.

- (c) That the effectiveness of the national and provincial strategies implemented in EFAL be evaluated, and, where they are effective, that the strategies be expanded.** Among the interventions, the following should receive concentrated attention:

- (i) Giving increased and sustained support to EFAL in the classroom, beyond the Grade 12 “Band Aid” strategies. In particular, significant interventions are required to empower teachers by enhancing their proficiency in English where the LOLT is English and teachers are non-native English speakers
- (ii) Prioritising the communication skills of pre-service teachers in teacher education, especially where they are non-native English speakers, both so that they are able to provide quality instruction through the medium of English as LOLT, and to raise awareness of the importance of doing so.

- (d) Both that criteria for selection be raised so that appropriate markers are appointed, and that these appropriate markers be given excellent and appropriate on-site training. This is an urgent intervention required across all provinces**

This is an urgent and feasible short term intervention. It will promote the fairness, validity and reliability of the examination results. And, along with the improved examination papers, it will establish a much enhanced “hidden curriculum” of the kind that is necessary to raise standards. Annual reports indicate that the majority of markers fall well short of the requirements to undertake the marking in this subject. It is imperative that the best possible candidates are recruited for EFAL and that they are effectively trained on the memoranda for the papers so they can mark consistently and fairly on the open-ended questions.

- (e) That marking rubrics be revised**

There have been repeated reports that the rubrics for the open-ended questions are problematic, but to date these have not been revised despite complaints. This has a significant impact on the quality of the marking and the results that candidates ultimately receive, because it is precisely in this area of more sophisticated writing that marking is most demanding. The unacceptability of the situation is highlighted in a system where 80% of the candidates are taking this subject. The issue needs to be addressed with immediate effect.

- (f) That the external international evaluation of papers be used more effectively**

DBE has sought the help of external agencies from England, Australia and Scotland (Cambridge International Examinations, Board of Studies: New South Wales and the Scottish Qualifications Authority) in evaluating selected examination papers. In many cases, their reports are very critical of the quality of the papers, but they are constructive and potentially very helpful in improving quality. However, (a) the reports have never been shared with the external moderators of the papers whose task it is to ensure that the standard and quality are appropriate. (b) it is also not clear whether the examination panels have had these reports to scrutinise and whether professional development activities have

occurred as a result. As a rich source of critique and engaged feedback, reports should be:

- (i) Shared with external moderators as a basis for reflection and to strengthen their ability to make appropriate demands
- (ii) Shared with examination panels
- (iii) Used to inform professional development.

4. IMPLICATIONS OF THESE RECOMMENDATIONS

These recommendations have a number of implications for the system, including, but not limited to, the following:

4.1 Pass rates

Raising the pass requirements has the following implications if applied to the 2013 RAW marks for the examination:

Language at First Additional level	Number enrolled	% of 2013 enrolment	% at 30% and above RAW marks	% at 40% and above RAW marks	% at 50% and above
Afrikaans FAL	87890	15	90.23	75.44	58.07
English FAL	454 666	79.94	97.81	84.97	56.23

Figure 3.4 Achievement levels for Afrikaans and English FAL at 30%, 40% and 50% based on raw marks in 2013 (Data: Umalusi)

- (a) More than 90% pass First Additional Language at the 30% level.
- (b) More than three quarters pass FAL at the 40% level
- (c) More than half pass FAL at 50% and above

These results reflect the raw marks of the examination. The final pass rate tends to be higher after the inclusion of the moderated School Based Assessment results and the language compensation.

The consequences of the change in pass requirements for EFAL would likely be in the order of the following:

- (a) NSC – no change
- (b) Higher certificate – 85% or more of candidates would reach at least this level
- (c) Diploma and Degree – about 56% would pass. This would still provide more than sufficient candidates for the current routes into further and higher education.

In a scenario generated by Volker Wedekind on data from 2008-2011 (Figure 3.5), the NSC pass requirements for LOLT are increased to 50% for Diploma and Bachelor’s and to 40% for the Higher Certificate. This suggests the following effect:

- (a) The pass rate for students at Bachelor’s admission level would hardly change,
- (b) An average of 12.26% of students currently qualifying for diploma passes would no longer achieve this pass and would qualify either for Higher Certificate or for the NSC without admission to further study.

This accounts for the projected increases in Certificate and NSC successes in the table below:

	2008		2009		2010		2011	
	Current	Scenario	Current	Scenario	Current	Scenario	Current	Scenario
Bachelor	23.01	22.43	22.79	22.36	26.52	25.40	27.42	26.49
Diploma	25.61	15.12	25.86	16.04	29.31	14.76	30.60	16.39
Certificate	21.10	28.58	18.56	24.22	18.26	26.45	18.42	27.37
NSC	0.04	3.64	0.11	4.71	0.14	7.62	0.11	6.29
Fail	30.23	30.22	32.68	32.68	25.77	25.77	23.46	23.46

Figure 3.5 Scenario: effect of increased LOLT pass requirements compared to actual percentage of learners achieving each level for the NSC 2008-2011 (Wedekind 2013)

This scenario refers to the implications based upon changing one factor: increasing the pass requirements. It does not factor in the consequences of increasing the cognitive demands in the papers and raising the standard of the examination. However, the latter effect would be ameliorated by Umalusi’s standardisation of the results. The rationale for increasing

cognitive demands and raising the standard in FAL is, after all, to prepare learners better and so improve the overall NSC success rate.

4.2 Workplace and Higher Education

The changes should raise the literacy levels and improve the command of English of those obtaining the NSC and moving into the workplace or higher education. Complaints about poor literacy levels and low English language proficiency are frequently heard from the business community and higher education. In one submission from the public, a director of a company made a heartfelt plea to government:

I am a director in a retail business where we employ around 8000 plus employees from highly skilled professionals to low skilled shelf packers and cleaners. It saddens me greatly to have intelligent and hardworking and diligent employees who are saddled with the burden of a poor education, who lack the confidence and skills to progress. As a business owner we understand the importance of on-going training and up skilling of our staff but please as the government give us a reasonable school leaver to work with. ... Send out Matriculants fluent in English and competent in true mathematics and I will give jobs, careers and confidence and make true citizens of the youth of this country.

The impact of the raised requirements, assuming a concomitant improvement in the standard of examination papers, could be significant within a relatively short period of time. The “backwash” effect of requiring a higher level of proficiency in Language of Learning and Teaching should also be felt across the curriculum as it would demand a higher level of language proficiency from both teachers and learners. This coupled with an effective professional development strategy for in-service teachers and emphasis on pre-service teacher training should significantly improve the situation.

4.3 Professional development of teachers

Interventions for the professional development of all practising teachers (including the teachers of English as a subject) need to be expanded to enhance the English language proficiency of current teachers, especially where the LOLT is English and the teachers are non-native English speakers. In addition, universities need to prioritise

the communication skills of pre-service teachers, especially where they are non-native English speakers, both to improve the competence of newly qualified teachers to provide quality instruction through the medium of English as LOLT, and to raise awareness of the importance of doing so.

4.4 Markers and Marking

The selection of markers for English FAL and Home language has to be far more rigorous and based purely on merit. Markers who fail to mark accurately and appropriately should not be allowed to continue marking. Better training of markers should be undertaken across all provinces to ensure a standardised approach to marking the open-ended questions. The underlying implication is that Chief and Senior Markers need to be experts in their field and to be able to manage the training of markers and quality of marking effectively. Furthermore, Umalusi would be advised to increase their monitoring of the marking to check that it is undertaken fairly and in a valid and reliable way across the provinces.

4.5 Marking rubrics

The rubrics for the open-ended questions must be reviewed and evaluated and modified where appropriate.

4.6 Sharing evaluation reports on examination papers with Umalusi

This would be a low cost exercise and could have a significant impact on approaches to assessing the examinations, providing Umalusi and its moderators with important feedback on the quality of work that they do, and strengthening the moderators' ability to make effective demands.

NOTES

¹ All 11 official languages are used as LOLT in grades R-3 but then, from Grade 4 up to Grade 12, only Afrikaans and English are used as LOLT.

¹ Schooling does not allow the child to use their home language for learning and the child works solely through a second, majority language (Garcia and Baker, 1995, p.xvii).

¹ Schooling where some or most subject content is taught through a second, majority language (Garcia and Baker, 1995, p.xiv). This is mainly due to code-switching. Teachers switch between the home language of the child and the official LOLT in a lesson.

¹ The first being Chinese in 33 countries and the second being Spanish in 31 countries.

¹ Extracted from *Specific aims of learning languages in the CAPS for home language and First additional language*, 2011 (in Umalusi, 2013).

¹ See Howie et al, 2009 and 2012 on Progress in international reading literacy studies (PIRLS) 2006 & 2011.

¹ See Annual National Assessment Grade 9 and other research.

¹ Department of Basic Education (2013). 2013 Evidence-based report. Pretoria: Department of Basic Education.

¹ EFAL Research Project document July 2013 workshop.

¹ Umalusi's Learning from Africa report where Ghana, Kenya and Zambia were investigated and compared to SA (Umalusi 2007b).

¹ Workshop document "An investigation into EFAL as LOLT", July 2013.

CHAPTER 4

LIFE ORIENTATION AND THE NSC

INTRODUCTION

The purpose of this chapter is to address two parts of the Terms of Reference (ToR):

- (g) To evaluate the ‘value add’ of Life Orientation as a subject that is designed to develop morals and values, and provide opportunities for physical education and career guidance to learners, and to determine whether Life Orientation should not be a non-examinable subject.

And, in some measure:

- (a) To establish the main criticisms of the NSC.

Evaluating the “value add” of Life Orientation (LO) is particularly important as the subject is central to the criticism of the NSC evident in submissions.

1. THE NATURE OF AND CASE FOR LO

LO was first introduced into the curriculum at Grade 12 level in 2008 when the National Senior Certificate was introduced¹. Prior to this, elements of this subject had been included in the subjects or activities Religious Education, Career Counselling and Physical Education, but were not uniformly taught across the system.

In the Revised National Curriculum Statement, LO is the study of the self in relation to others and to society. It applies a holistic approach. It is concerned with the personal, social, intellectual, emotional, spiritual, motor and physical growth and development of learners, and the ways in which these dimensions are interrelated and expressed in life. LO draws on Sociology, Psychology, Political Science, Human Movement Science, Labour Studies and Industrial Studies.

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The purpose of LO is to equip learners to engage on personal, psychological, neuro-cognitive, motor, physical, moral, spiritual, cultural, socio-economic and constitutional levels, to respond positively to the demands of the world, to assume responsibilities, and to make the most of life's opportunities. It enables learners to know how to exercise their constitutional rights and responsibilities, to respect the rights of others, and to value diversity, health and well-being (DBE 2003, 19).

The curriculum emphasises skills such as emotional intelligence, working in teams, managing diversity, decision-making, conflict resolution, planning, time-management, creative problem-solving, flexibility, intrinsic motivation and relationship- and communication skills (Umalusi 2013f).

In other contexts internationally, these are often referred to as Life Skills: abilities for adaptive and positive behaviour that enable the individual to deal effectively with the demands and challenges of everyday life (WHO 1993) and help an individual to be successful in living a productive and satisfying life (Hendricks 1996 in Mtshali 2013).

Life Skills Education (LSE) has become an integral part of the curricula for schools in Africa, in particular, Southern Africa. It has been seen as addressing the need to strengthen young people's knowledge and to influence behaviours to better enable them to protect themselves from sexually transmitted infections (STIs), unwanted pregnancy, and at risk behaviours including substance abuse (Mnthali 2008). Life Skills, such as decision making and relationship formation, help the individuals to increase their control over their own health and life in general (Riga 2005 in Mtshali 2013). LSE means not only imparting information, but also enabling learners to develop the skills to apply adequately in practice the knowledge gained (Riga 2005 in Mtshali 2013).

A young person leaving the formal school system after 12 years should not only have knowledge but should also be equipped with skills that will help him/her deal with the challenges of the real world. However, only a fraction of all learners leaving school after 12 years of formal schooling will go on to higher education; the majority will enter the world of work. In either case, learners need to be equipped with life skills to cope with the demands of the real world and take their place successfully in the economy of their country. These demands are not only related to the knowledge of work and how to find a suitable career, but also affect young people emotionally, mentally and physically. These demands call for learners, upon leaving the formal school system, to demonstrate their knowledge of life skills

as well as their application in challenging situations in particular those related to their physical health, psychological well-being, career choices and relationships (Mtshali 2013, 6). In South Africa, LO is important to prepare the student for societal participation in a positive, effective, productive, healthy, morally and socially acceptable manner aligned to building a united, democratic South Africa, within a global context. In particular, given that South Africa has a variety of cultures, religions, and languages, its diverse citizenry makes the design of a varied, relevant curriculum critical (Umalusi 2013d).

The importance of this subject has been repeatedly emphasised in many fora, especially with regard to the challenges of building a united society in South Africa. Given the high rates of teenage pregnancy, unemployment, poverty, abuse, family breakdowns and unplanned urbanisation, teaching teenage children essential knowledge and skills about how to navigate life's challenges is an essential part of their education.

Internationally, the term "life orientation" as a subject does not appear in the literature outside of South Africa; the closest appears to be Life Skills, used in some African countries. However, subjects related to topics found in the South African curriculum are found. Terms such as Social studies learning area (Chinese Taipei), Citizenship education (Czech Republic, England), Standards of citizenship (Colombia), Moral and civic education (Dominican Republic), Moral education, Social studies (Republic of Korea), Civic and ethics formation (Mexico) are amongst the various permutations found (Schulz et al 2010, 21-22).

In particular, civic and citizenship education is widely taught across the world. International studies of civic education have revealed at least 20 countries including a specific subject concerned with civic citizenship education in their respective curricula. Many integrate the relevant content into other subjects and include the content as a cross-curricular theme (Schulz et al. 2010, 15). In total 34 countries had either a separate subject or had integrated the content into other subjects. Civic and citizenship education internationally covers a wide range of topics such as knowledge and understanding of political institutions and concepts (e.g. human rights), social and community cohesion, diversity, the environment, communications and global society.

Most teachers and school principals who participated in the International Civic and Citizenship Education Study 2008-2009², regarded the development of knowledge and skills as the most important aim of civic and citizenship education. These typically included

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“promoting knowledge of social, political and civic institutions, developing students skills and competencies in conflict resolution, promoting knowledge of citizens’ rights and responsibilities and promoting students critical and independent thinking. A number of developing countries such as Mexico, Guatemala, Colombia, Chile, Paraguay, Dominican Republic, Indonesia, and Thailand participated in the study. Out of 38 countries, 15 (including Colombia, England, Guatemala, Italy, Lithuania, Luxembourg, Mexico and Spain) regarded civic and citizenship education as having a high priority in the schooling system. Thirty of these countries dealt with civic and citizenship education in the classroom, while the remaining countries included it in assemblies, special events, and extra-curricular activities (Schulz et al. 2010, 43).

The results from the ICCS 2009 national contexts survey showed that whereas, in almost all of the participating countries, civic and citizenship education was part of the national curricula for primary, lower-secondary, and upper-secondary education programmes, the content was covered under subjects with a wide diversity of names. In some countries, the subject names include the words “civic” or “citizenship”; in others the names signal a more general orientation, such as “social studies” or “knowledge about society.” In 20 of the 38 countries studying civic and citizenship education (either as separate subjects or integrated into different subjects), the national centres said the subject was compulsory. Scandinavian countries tended to integrate the themes into several subjects whereas Asian countries (with the exception of Hong Kong) taught them as separate subjects and Eastern European countries were mixed in their approach. Of the 38 countries surveyed, almost all taught the subject area from primary school through to upper-secondary school, with two exceptions, Hong Kong and Ireland, which did not offer it in upper-secondary school (Ainley et al. 2013, 21–22).

Due to the different approaches to offering the content of civic and citizenship education, teachers teaching this field can be categorised into three types: (1) teachers of all subjects (14 countries), (2) teachers of subjects related to civic and citizenship education, but with this material integrated into other subjects (35 countries), and (3) specialists in civic and citizenship education, teaching this content as a separate subject (13 countries) (Ainley et al 2013, 25).

With regard to assessment of students in civic and citizenship education, only eight countries did not assess their learners in this subject and these tended to be countries that did not have a specialist subject dedicated to this field but rather integrated the themes across

subjects. It was not clear from the report what the level of assessment was and whether it was at all levels.

It is clear from the encyclopaedia detailing the approaches to civic and citizenship education that systems deal with this very differently. In the examples which follow, the meaning of *Grade* varies from country to country:

In **Austria**, they adopt multiple approaches to citizenship education and do not assess the area formally. However, there is a government plan to implement an external assessment of students' learning outcomes benchmarked to nationwide educational standards. Students will experience these assessments after several years of learning. A further plan is to introduce standardised, competence-orientated final examinations into upper-secondary academic schools (Ainley et al. 2013, 32).

In Austrian primary schools and in Grade 5, civic and citizenship education is a cross-curricular learning area. However, in 2008, legislation made this area of educational provision an explicit part of the curricula for Grades 6 to 8 of secondary education. At this level, the subject is called "history, social studies, and civic education." From Grades 9 to 13, civic and citizenship education is integrated into different subjects in all schools, except vocational training schools, where it is a specific subject. In lower-secondary education (Grades 6 to 8), the objectives of civic and citizenship classes are to give students information about and to help them understand diverse political and civic ideas and institutions and to bring to their attention the dichotomies of and tensions between societal laws or rules and individual freedom, participation and nonparticipation, and war and peace (Ainley et al. 2013, 33-34).

Mexico has a different approach. It does not offer it to the last grade but does assess the subject area. The national curriculum for education contains a formative learning field called "personal development and development for coexistence." It incorporates aspects of civic and citizenship education and is delivered in different ways from preschool education through to the end of lower-secondary education.

- (a) In preschool education, this area of learning is called "personal and social development."
- (b) In primary education, a subject called civic and ethical education (formación cívica y ética) is offered from Grades 1 to 6.

- (c) During the first year of secondary education (Grade 7), students learn civic and citizenship-related aspects under a state-selected special subject (asignatura estatal), which can include different thematic fields.
- (d) During lower-secondary education (Grades 8 and 9), students are taught subjects called “civic and ethical education 1” (formación cívica y ética 1) and “civic and ethical education 2” (formación cívica y ética 2). Students also learn other civic-related aspects in various subjects, most particularly the sciences (biology especially), geography, and history. (Ainley et al. 2013, 284)

None of the 38 systems reviewed in the ICCS encyclopaedia (Ainley et al. 2013) had an exit examination at Grade 12 that was a dedicated, compulsory, external examination for civic and citizenship education or other topics within the scope of LO. Only two countries, England and Estonia, had a dedicated examination, and the subject was offered as an option at Grade 12. Korea offers an examination at the end of Grade 11 also as an optional subject. Finland used to examine the subject at the end of Grade 11 as part of its exit qualification, but ceased doing so in 2003. Four other countries (Malta, New Zealand, Norway, and Poland) assess civic and citizenship education at Grade 12 level only as part of Social Studies or integrated into History, both optional subjects.

2. THE CURRENT SITUATION OF LO IN SOUTH AFRICAN SCHOOLS

The introduction of LO increased the number of subjects to be taken at Grade 12 from six to seven. LO is currently taught in the FET phase for 2 hours per week (DBE, 2011, 28) and is one of the few subjects taught from Grade 1 to Grade 12.

At the Grade 12 level the curriculum learning outcomes include:

Personal well being	The learner is able to achieve and maintain personal well-being.
Citizenship education	The learner is able to demonstrate an understanding and appreciation of the values and rights that underpin the Constitution in order to practise responsible citizenship, and to enhance social justice and environmentally sustainable living.

Recreation and physical well-being The learner is able to explore and engage responsibly in recreation and physical activities, to promote well-being.

Career and career choices The learner is able to demonstrate self-knowledge and the ability to make informed decisions regarding further study, career fields and career pathing.

There are a number of challenges facing this subject. While it is widely acknowledged that the content of the curriculum and the learning outcomes (see above) are valuable for this age group, the subject does not enjoy the prestige of other subjects and so is often not given serious attention or not taught well. This relatively low prestige and neglect is exacerbated by LO's being assessed internally and not in the public examination.

Umalusi (2013) notes that the lack of external assessment and poor quality internal assessment affect the status and credibility of LOs that the subject is not taken seriously by schools, and its allocated class time is often used as extra time for other subjects.

Furthermore, *Recreation and physical well-being* is supposed to be given 50% of the teaching time, with the 3 remaining Learning Outcomes having to share the remaining 50%; yet the evidence that learners do participate in physical activities is limited.

On Umalusi's analysis, if LO is not achieving its purpose, it is because:

- (a) Some schools do not dedicate time to teaching the subject
- (b) There are few appropriately trained and dedicated teachers, and
- (c) Most teachers lack the broad expertise required to teach the subject.

Comments based on an ongoing research study for a Master's degree (Oosthuizen 2014) were submitted during the public submissions process. The researcher revealed in his study of the management of the teaching of LO by high school principals in the Nelson Mandela Metropole that this sample of high school principals felt that the status of LO

is very low because of the fact that it is not examinable and they are concerned that the subject with its good intentions and outcomes can disappear if it is not assessed externally like the other subjects.

Furthermore, he feels that:

The DBE also needs to provide schools with LO teachers in the staff establishments. BUT there is also no qualification that LO teachers can study that will prepare them for teaching all the subject outcomes. Many schools are understaffed and LO became a filler subject to ensure that all staff members, irrespective of their actual subject and training, have full timetables. This causes that the subject is taught by people who are not qualified, have no passion and are not interested in reaching the outcomes. The physical education component is very problematic – the schools have no qualified personnel to teach this properly.

Until 2012, LO was entirely assessed at school level with no common assessment or external examination. In 2012, a common assessment task was developed, constituting 20% of the final mark. It was introduced across all provincial departments. In order to assist teachers and learners, an assessment framework and exemplars were developed and disseminated to schools to prepare for this task. It was then implemented in 2013 in all schools. Tasks were marked at schools and Heads of department or senior teachers had to moderate 10% of these. Provinces had to sample and moderate scripts from 10–20 schools in each district and moderate 10% of these.

3. EVIDENCE

There is divided sentiment and opinion amongst the public about the role and value that LO currently has in school. Several submissions saw immense value in the subject:

Life Orientation should be retained from grade R to grade 12. It covers all aspects that are vital to learners and that are not dealt with in other school subjects, for example physical education, study skills, relationships, preparation for further study, careers and the workplace, development of the self, and social and environmental responsibility. (Public submission from a co-author of Life Orientation)

Physical Education should be separated from Life Orientation and be a stand alone non-examinable subject. Areas like townships could have one trained PE teacher attached to maybe 3 schools. Funding for such posts could be shared with the Department of Sports and Recreation. (Public submission from Educator)

I think life orientation is necessary, because the children are in their puberty stages and they need to know what is happening to their bodies, understand peer pressure etc. However I do not believe it should be examined, because it somewhat takes on the role parents should be playing and it doesn't carry as much weight to university entrance. I also strongly believe that religious education should also be included in the school curriculum, but not be examinable. It can stand on its own or be married with Life Orientation. (Public submission, member of public)

Life orientation will always be needed; it talks to us mostly about things that our parents do not normally talk to us about. (Public submission, member of public)

Some saw value, but felt that LO should only be included if external evaluation of it was undertaken:

... I sincerely endorse the fact that Life Orientation must be marked externally. It is the only subject that teaches values and life skills. And all learners and principals will give the respect it deserves. They will never make it as a gap to be filled by any teacher who has not enough subjects. I say it must be examined external(ly).

(Public submission, member of public)

I fully agree that Life Orientation should be an examination subject as parents do not teach or have time to teach their kids morals and values of which have been lost and almost non-existing of late. (Public submission, member of public)

We have seen improvement in the management of Life Orientation but a lot more is needed. It must be treated like any other subject, must be marked externally with teachers appointed as markers, stricter management of P.E.T is also required as teachers fail to administer this part as lack of resources are available in school.

Public submission, member of public

As a Life Orientation educator and activist, I am convinced that Life Orientation has the potential to add more value to learners in what it seeks to achieve. However, this is hampered by the fact that it is essentially School Based in terms of assessment instead of being assessed externally in Grade 12 like other subjects. No wonder we have a problem of negative attitude towards the subjects by all stakeholders including teachers and principals. In its current status, one is not surprised that L.O is not given the recognition it deserves. That is why it is treated as just another add

on subject by schools and always allocated last just to make sure that teachers have the necessary quota of periods. (Public submission, Educator)

A number of submissions were negative about the subject and proposed scrapping it altogether:

It is my sincere wish to have Life Orientation totally & completely scrapped out of the curriculum as it has no basis or platform for consideration based on University Admission Requirements and has little or/and no value on the strategic needs/objectives of the Nation let alone in the NDP.

(Public submission, member of public)

Let life orientation be removed and be replaced by other subjects like home economics or agriculture to schools that does not do these subjects.

(Public submission, member of public)

The educational organisations called upon during the public hearings to comment on and propose recommendations were unanimous about the value of LO and its role in the curriculum. However, most expressed the view that it should be examined partly or completely externally rather than using the current model of school-based assessment.

Assessment is not the only problem. From research conducted by Prinsloo (2007) in schools in the Free State, Limpopo and Western Cape, there appear to be a number of barriers preventing the effective teaching of this subject. Principals reported that learners appeared to be lacking in value systems, there was a lack of parental involvement and support, there was also a lack of parental discipline and authority at home, and the community was negatively influencing the learners' behaviour through failure to abide by the law and the general societal problems of abuse, violence and criminality. This was exacerbated by the lack of proper role models on the teaching staff and difficulties with the Department of Education policies and issues related to cultural diversity. In the same study, teachers reported a lack of adequate training for LO, leading to feelings of inadequacy and failure in the class. This evidence from teachers and principals provides both a powerful rationale for offering the subject and an index of the great need for better training to teach what is clearly a difficult subject in current schooling conditions.

In general, LO has been the source of much concern at various levels in the education system as well as in the quality assurance bodies. While the programme is considered well-developed and well-structured, there are enormous challenges in implementation, such as

the need both for professional development of teachers and for the LO teacher to demonstrate considerable integrity (Prinsloo 2007).

These problems manifest themselves in a number of ways. Umalusi has consistently raised issues around the standard of the assessment conducted at school level, the inflation of marks and the over-estimation of marks at distinction level³.

An examination of the raw LO results (2009-2013) revealed that:

- (a) Marks were consistently inflated in underperforming schools.
- (b) Marks were sometimes reduced in well-performing schools.
- (c) Many schools tended to inflate marks at the distinction level.
- (d) LO marks tended to inflate the national pass rates in conjunction with the other School-based Assessment marks and language compensation (see Chapter 7)
- (e) LO attainment is significantly above any other subject, with the exception of the African languages and does not correlate well with performance in other subjects.

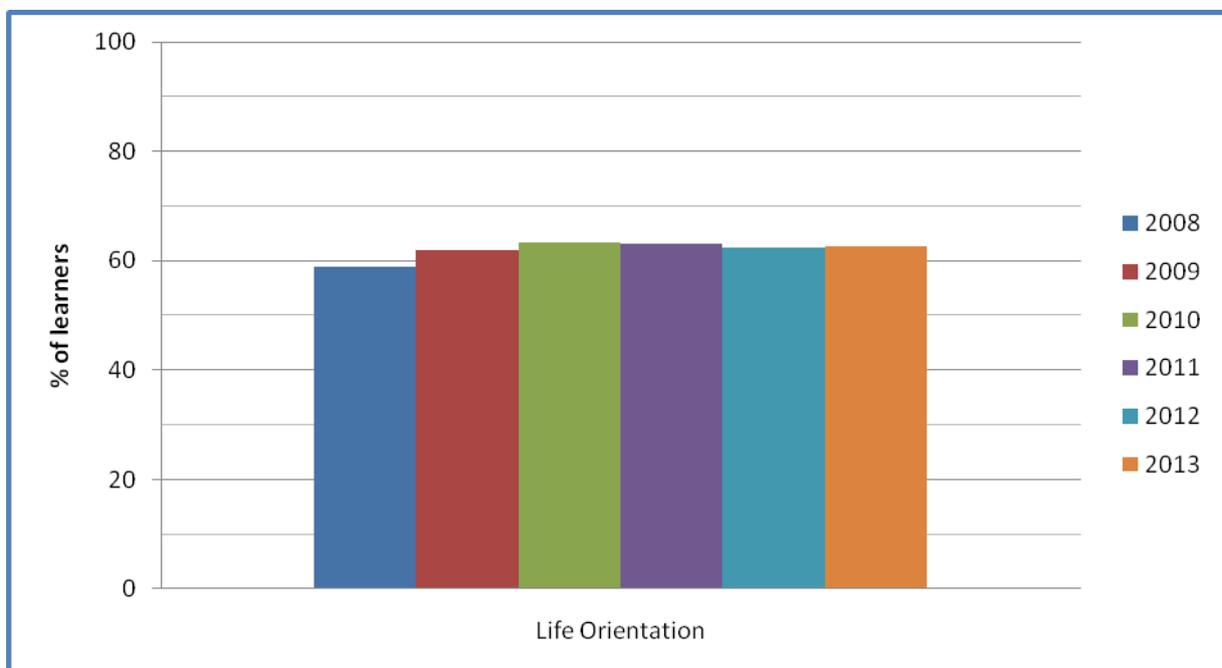


Figure 4.1 Mean percentage obtained for Life Orientation for 2008-2013 (Data from DBE 2013b)

³ See Umalusi annual reports

The raw marks for LO from the school-based assessment have to be accepted by Umalusi. They cannot be standardised because there is no standardised assessment nationally (see chapter 7). This is partly what causes the inflation of individual school and learners' marks. The introduction of the Common Assessment task weighted at 20% was intended to moderate this effect and to increase the validity of the LO marks by standardising one aspect of evaluation. As can be seen from Figure 4.1, this has had no effect on the national mean percentage obtained for 2013. The moderating effect thus appears negligible. However, the DBE reported a considerable difference between the results of the common task and the rest of the SBA marks for LO (DBE 2013b).

Figure 4.2 illustrates the high scoring nature of this subject with 57% of the learners achieving 60% and above and a negligible proportion below 30%.

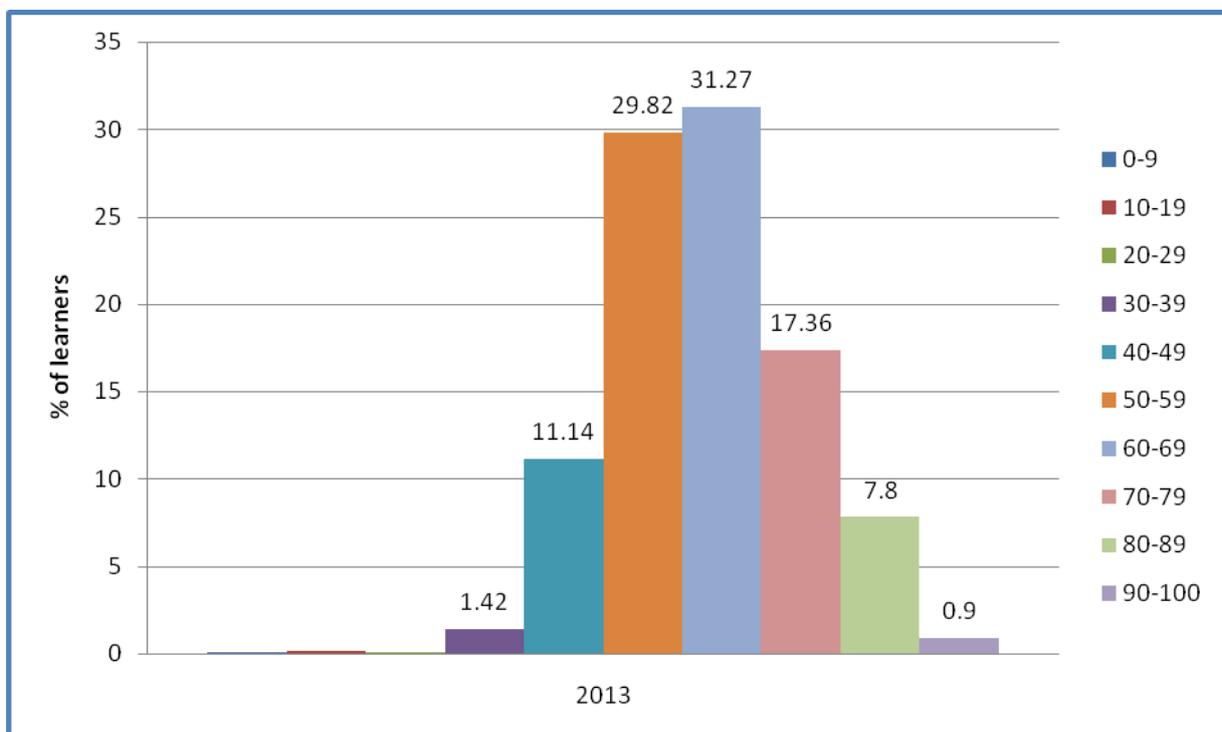


Figure 4.2 Life Orientation performance distribution 2013 (Source: DBE, 2013b)

4. RECOMMENDATIONS

As a basis for the recommendations below, the following conclusions are drawn in relation to sections (a) and (g) of the Terms of Reference:

- (a) LO is widely valued as an important subject to inculcate morals and values, and provide physical education and career guidance to learners. However, the

current teaching and assessment of the subject are undermining its value and credibility within the schools and across society.

- (b) Most aspects of LO, given their content, should not be assessed (*Personal well-being, Physical education and career education*) in the FET. There does however, appear to be merit in evaluating learners' knowledge of the Citizenship component in line with international practice of what is commonly known as Civic Education. However, it should be noted that few countries assess this at an equivalent FET level. At Grade 12 very few assess it, and then as an optional subject.
- (c) There was a diversity of opinions about the future of LO in secondary school.
- (d) Furthermore, learners' health and well-being is currently at risk as untrained teachers are offering physical activities without any credentials or training in physical education, which could lead to injury or worse.
- (e) There is a need for teachers with qualifications in LO, in particular those with specialised knowledge in physical education, educational psychology and career counselling, to be deployed to schools, and there is a related need for professional in-service training in these areas.
- (f) Given the very demanding assessment load of seven subjects, and the problems related to standardising LO results, the subject should be removed from the promotion requirements for the NSC. This would reduce the subjects to be examined to a more internationally comparable six.

The public submissions, as well as the public hearings, elicited a number of proposals regarding LO. While some argued for retaining the status quo, most fell into two schools of thought. (a) Make LO an examinable subject (and include elements such as financial planning and computer literacy). Ideas included either having a 50% external examination or implementing a provincial examination held during the trial examinations. (b) Remove it completely from Grade 12, or retain only *Recreation and physical well-being* and *Career choices* and remove any form of assessment in Grade 12.

Having reviewed the public submissions, listened to the presentations at the hearings and consulted broadly, the committee recommends the following:

Specific Recommendations:

4.1 Remove LO from the promotion requirements for the National Senior Certificate.

Currently there is a serious credibility problem with LO being assessed in a valid and reliable way, given that much of the curriculum does not lend itself to formal assessment. Furthermore, given the state of the School Based Assessment (see chapter 6), credibility in the qualification has been eroded because of the inflation in the pass rate caused by this subject, which is entirely assessed at school and which cannot be viably standardised currently. Many universities do not give learners credit for this subject in the entrance applications to higher education. Removal of this subject would result in the reduction of subjects back to an internationally comparable six subjects being assessed in the final exit examinations.

4.2 Reduce the Grade 12 LO content, retaining sections related to physical education and career counselling during Grade 12 without either of these topics being assessed.

Given the submissions that the content of the curriculum is important for many societal and personal development reasons, it is important that the entire subject not be removed completely. Two immediate and highly relevant needs are the physical health of the learners and the learners need for career counselling in Grade 12 being the exit year. The time freed from reducing the content can be used for subjects requiring extra time on task.

4.3 Include a formal summative assessment on LO at the end of Grade 11 that serves as a pre-requisite for entrance into Grade 12.

There are fears that what is not assessed is not taught. Giving significant emphasis to assessment of LO at the end of Grade 11 should assist in addressing this concern.

4.4 Retain LO in the FET up to the end of Grade 11, but integrate the Grade 12 sections on personal well-being and citizenship education into the Grade 10 and 11 curricula, given the inherent need in our society to promote key issues such as citizenship, morals, physical and mental health amongst others.

4.5 Focus formal assessment of LO in Grades 10 and 11 on citizenship education.

This overcomes the difficulty that the greater part of the Life Orientation curriculum

does not lend itself to being formally assessed, and follows well-established international practice.

4.6 Deploy teachers to schools with the necessary training and qualifications in LO associated topics. There is a particular need for trained teachers in physical education and career counselling and in general for professional development in these areas.

It is believed that these recommendations will assist in preserving the integrity of the NSC qualification, whilst still maintaining critical elements relevant to the learners of this age group.

5. SYSTEM IMPLICATIONS

The primary system implications are related to the curriculum, pass rate, higher education and teacher development.

Curriculum

The topics to be taken out of the Grade 12 curriculum (Learning Outcomes 1 and 2) will need to be redistributed into the Grade 10 and 11 curricula, and a common assessment will need to be designed and implemented at the end of Grade 11, focusing on citizenship education. Passing this assessment will be a prerequisite for entrance into Grade 12.

Pass rate

The pass rate of the traditional low-achieving learner group (in the Basic Pass and the Higher Certificate) will probably fall, as LO's disproportionately high marks are currently inflating learners' marks at the lowest levels. However, implementing the recommendations will enhance public perception of and confidence in the quality of the NSC.

Higher Education

There are few significant implications for higher education currently as many institutions do not use LO results for selection purposes. However, the call for further professional development of teachers may impact on universities should the DBE heed both the pre-set and in-set needs.

CHAPTER 5

THE NSC AND EDUCATION PATHWAYS

INTRODUCTION

It was never the intention of the Apartheid government to enable the majority of South Africans to participate in building a strong national economy through access to advanced knowledge and skills. All the policies relating to education until 1994 were intended to segregate and discriminate, ensuring that the enfranchised minority maintained power. This was accomplished through the creation of homelands and group areas based on race and ethnicity, and through hugely discriminating per capita allocations of resources, favouring the white minority (See Figure 5.1).

Per Capita Expenditure on Education in Apartheid South Africa

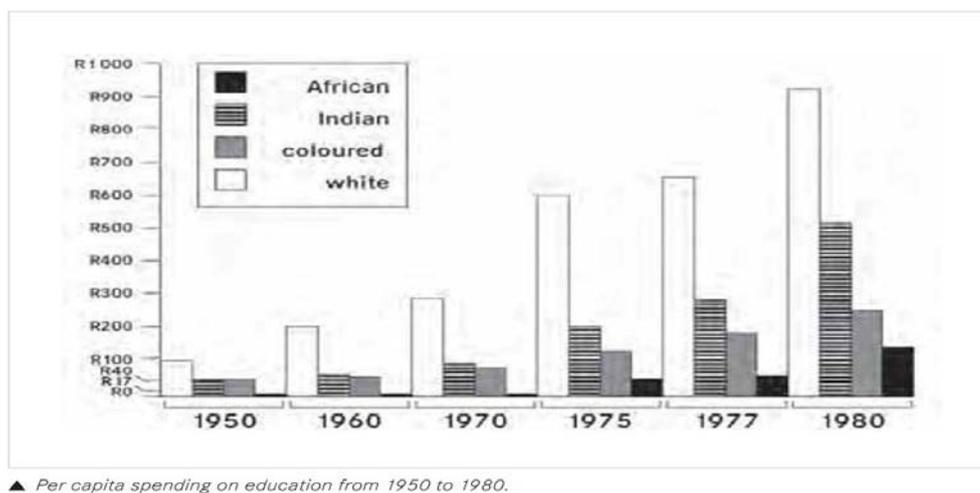


Figure 5.1 (source <http://www.apartheidmuseum.org/Learners Chapter 3, p. 48>)

The consequence of this discrimination against approximately 90% of South Africans was that a large percentage experienced their learning from poorly educated and trained teachers, and with few of the resources like suitable buildings, text books, science equipment and other tools necessary for success. Others, also a large percentage, did not have schooling at all. At the start of the democratic era, Mastin Prinsloo (1994, 1-21) estimated: “about 15 million Black adults (over one third of the population) are illiterate and have had little or no education. This is a direct consequence of the (racial) inequalities in the provision of education and training.... The lack of access to basic education, including literacy and numeracy, has consigned millions of our people to silence and marginalisation

from effective and meaningful participation in social and economic development.” Twenty years on, this remains a huge challenge.

Since 1994 significant support has been given to general education through the Basic Education system with approximately 25 000 schools accommodating the still-growing cohorts of learners. But so great is the post-apartheid challenge that there is no possibility of the state, in the short to medium term, raising the level of support to match what was available to white schools under apartheid, and many schools, especially in the rural areas, are not experiencing transformation at a desirable rate.

South Africa has another education and training problem keyed to its socio-economic realities. Large numbers of learners are dropping out of school without the National Senior Certificate (NSC), and a growing number of them (more than 3 million) are not in work, not in schools and not in training. This situation has been called a time-bomb waiting to explode.

It is clear that one of the answers to the myriad challenges facing our nation is that we must grow the economy, increasing work opportunities, creating resources to make transformation possible at the level we desire, and generating a sense of ownership and purpose. Education has a key role in this. So much depends on growing the economy that the entire national education and training system must engage with the challenge with vigour, passion and wisdom. We must create the integrated pathways and the destinations through which our nation can build the knowledge and skilfulness required for economic success. This chapter addresses the terms of reference of the Ministerial Committee which relate to such articulation and pathways.

It will explore:

1. Education, the NSC and the National Economy
2. Shared Understandings : The Nature and Purpose of the NSC
3. The significance of NSC Success
4. The Question of Dropouts
5. Pathways from the NSC

6. The NCV and the Technical High School
7. The Grade 9 Exit Certificate
8. Recognition of Prior Learning

1. EDUCATION, THE NSC AND THE NATIONAL ECONOMY

There is an abundance of evidence for the view that the quality of national education systems profoundly influences the living standards of people and their capacity to participate in the global knowledge economy. The UN poverty and human development indices and the data with respect to access to high levels of education internationally reflect this starkly.

(See the four maps immediately below. The first was obtained from <http://www.ruralpovertyportal.org> and the three which follow from <http://www.worldmapper.com>.)

WORLD POVERTY MAP

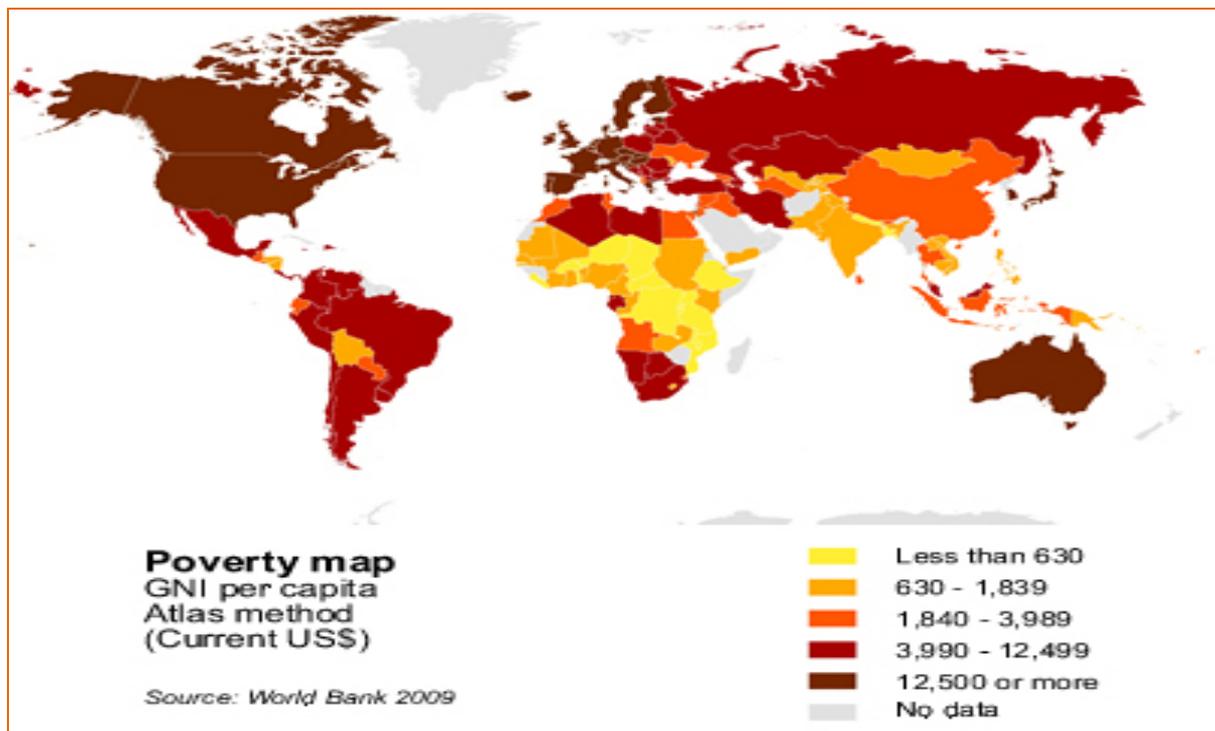


Figure 5.2 (Source: <http://www.ruralpovertyportal.org>)

Tertiary Education

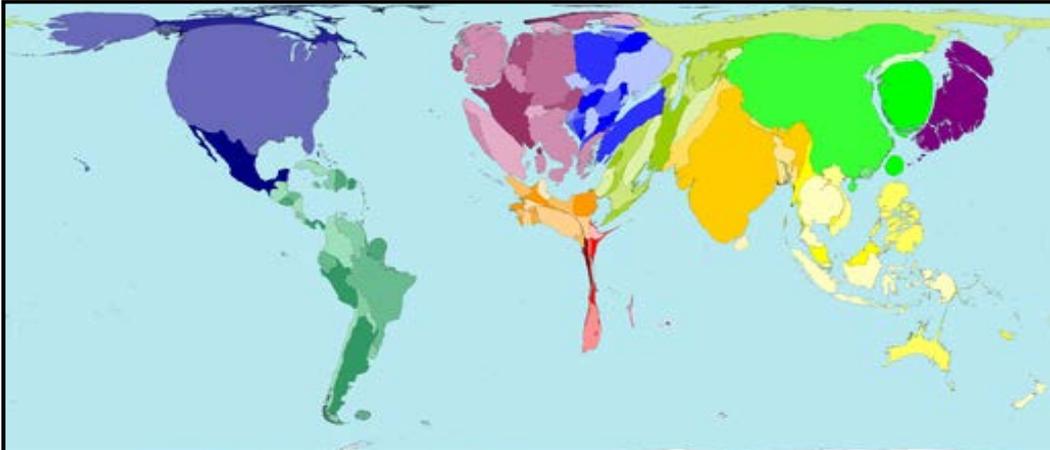


Figure 5.3: The larger the area the greater the number of tertiary students [worldmapper](#)

Science Research

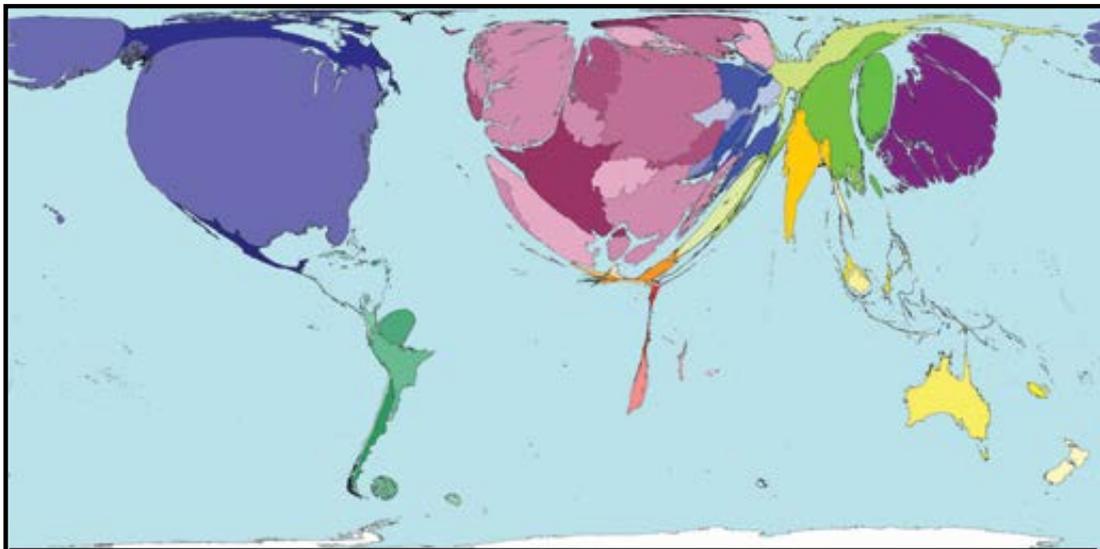


Figure 5.4: The larger the area the greater the research output [worldmapper](#)

New Patents

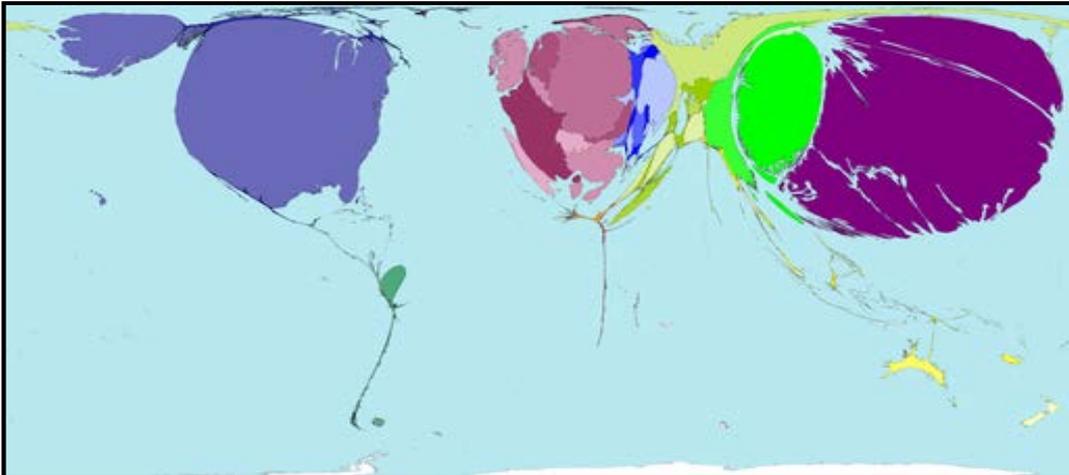


Figure 5.5: The larger the area the greater the number of patents registered worldmapper

With some exceptions where there are natural resources in abundance, nations with the highest standards of living all have powerful basic education and post-school education systems and have the capacity and competence to innovate. A common characteristic of such nations is that the culture respects knowledge appropriate to the time and deeply and strongly amplifies the need for citizens to acquire knowledge and skills through education and training. They also encourage their citizens to take full ownership of their futures through this commitment by providing access to the best education possible as well as opening pathways to acquiring the ever higher levels of knowledge and skill appropriate to the 21st century. Finally, they create the understanding that both the acquisition of knowledge and skill and the creation of new knowledge are only possible through dedication and hard work.

Figure 5.6 Features of nations with a high standard of living

- (a) Their culture respects knowledge appropriate to the time
- (b) Their culture deeply and strongly amplifies need for citizens to acquire this knowledge (and skill at using it) through education and training
- (c) Their culture encourages citizens to take full ownership of their futures

- (d) They provide access to the best basic and post-school education possible.
- (e) They open pathways to acquiring the ever higher levels of knowledge and skills needed in the 21st century.
- (f) They foster innovation.
- (g) They foster understanding that dedication and hard work lie behind acquisition of knowledge and skill, and the creation of new knowledge.

A major post-apartheid challenge facing South Africa is to grow a 21st century economy, moving away from a resource base to a strong investment in knowledge-based developments. To achieve this, our country must develop a vigorous learning culture capable of producing the knowledge, skill and technology required and of using them to good effect.

It is significant that South African national planning has made education in support of economic transformation a very high priority. But the effectiveness of education in this regard depends on its orientation in thought and deed to the envisaged economic future. We have to develop as much as possible of our nation's talent pool, opening the way for full use of our very diverse capacity. This requires reflective review of current practice which organises itself (often equivocally) around academic priorities. It requires dynamic development across different pathways in education, with an emphasis throughout on excellence. And it calls for principled flexibility of access to learning programmes. Against such a demanding background, this chapter examines some of the more pressing challenges.

Wedekind (2012, 3) sees the NSC as an important indicator of the educational culture of our nation. "Given the *de facto* role that the NSC plays as the main exit point from the schooling system, it is necessary to understand what that role entails and what the patterns of achievement are that influence learner pathways and destinations". Wedekind's broader argument is premised on the understanding that the quality and relevance of a national education system can determine the social and economic trajectory of a nation.

South Korea is an outstanding example. In 1958, five years after the end of the Korean War, South Korea had an agrarian economy characterised by peasant farming, as did Ghana. Its population size was similar to Ghana's, as was its per capita income. For its economic future South Korea chose a high level technological economy as its goal and sought to develop a learning culture driven by science and innovation, supported by the state and external investment.

One of South Korea's goals was to develop a high proportion of PhDs per capita, essentially in key areas of science and technology. While aware of the complexity of dramatic cultural change from peasant farming to the digital world, they created and amplified the appropriate education system to support this change. South Korea attached strong national significance to high standards in their "matric" examination, especially in Mathematics and Science. They also set the bar for access to the University very, very high and learners faced fierce competition. Korea, like China and Taiwan, also understood that in the short term its national school and higher education system would not have the capacity or competence to support the levels of knowledge and skills which their economic and development strategies demanded. They responded to the urgency of their needs by viewing the world's universities as part of their system and large numbers of the brightest and most promising Korean students and staff members were sent into the higher education world in other countries. Their mandate was to return to South Korea with the best knowledge available to support the national vision, and to bring with them the people with the best minds they encountered in those countries, who were willing to come to teach, transfer their skills and do research in Korea.

Ghana and Korea were economically comparable, with similar per capita income in 1958. Just more than 50 years later, in 2011 Ghana's per capita GDP was \$1,570.1 and South Korea's \$22,424.6 (Indexmundi <http://www.indexmundi.com>). An extremely competitive education environment and a motivated workforce are given as two of the key factors driving South Korea's knowledge economy. The country now has the world's largest R&D budget per capita and files the largest number of patents in relation to the size of GDP in the world. In addition, the capital Seoul has more PhD residents than any other city in the world.

Neither Ghana in 1958 nor South Africa in 1994, took the visionary path which led to South Korea's success. Instead both opted for the conservative strategy of "growing our own timber with our own timber". South Korea has done 17 times better than Ghana when it comes to building GDP and national prosperity. Where, then, does South Africa stand? Here are two suggestive indices. Although we are the best-resourced scientific nation in Africa, we

produce only 30 PhDs per million citizens per year, a sixth of what South Korea produces. And in the TIMMs 2011 Mathematics and Science tests, South Africa came 49th out of 50 nations in the international Grade 8 test, with Ghana last. South Korea, by contrast, was 3rd out of 50. South Korea has a high-tech infrastructure, with the world's highest broadband internet access per capita, and is a world leader in innovation.

A significant contributor to South Korea's success which helped raise the living standards of its people is its sophisticated and challenging education system and its powerful work ethic. Should and can South Africa try to emulate this? Should and can we create an educational culture that sees our nation transcending its colonial and apartheid educational past and creating a knowledge economy enabling us to hold our own in the world? Stated differently, can we survive and flourish if we do not? We have an opportunity. The National Development Plan (NPC 2013) invites us to frame the relationship between our national economic aspirations and education and training, and through leadership throughout the nation, from the state to the community, to galvanise all South Africans to strive for education and training excellence. The newly created Post-School Education and Training system provides the promise that South Africa will move quickly to build an "expanded , effective and integrated post-school system.... for those who have completed school, those who did not complete their schooling and those who never attended school".(2013,xi)

RECOMMENDATION: 1

South Africa must communicate a clear vision of its economic future and how it can be reached. It must use the best knowledge available and project as far as possible into that future to be able to inform the nation of the extent of the challenges facing us and of the role of all citizens in meeting them. The goals that support that vision must then shape the nation's education system. The task of which is to realise those goals in the shortest possible time with the full support of national leadership and the communities.

2. SHARED UNDERSTANDING OF THE NATURE AND PURPOSE OF THE NSC

562 112 full-time candidates wrote the National Senior Certificate examinations in 2012. The results, when announced, were acclaimed as the best since 1994, as 439 779 (78%) were successful. The response to this "good news" ranged from elation to incredulity. This is not strange. While there is some evidence that our Basic Education system is making progress, the leap to a 78% pass rate against the background of dismal, sometimes shockingly poor

results obtained in almost every independent local and international rating, must raise questions. These independent judgements include our ranking by the OECD, the World Economic Forum, TIMSS, our own Annual National Assessments (ANAs) and the National Benchmark Tests (NBT). There is no escaping the conclusion that South Africa has one of the poorest performing school education systems in the world. Employers and universities confirm the independent assessments from practical experience, bemoaning the poor preparation of our matriculants for tertiary study and employment. Against such a background, the dramatic gains made in the NSC must inevitably invite scepticism.

What is now quite clear in the age of the global knowledge economy with its dependence on digital media is that the quality of a nation's education system has very serious implications for development and transformation. Speaking generally, Wedekind (2012) refers to four distinct groups which have a direct interest in the NSC and who approach their judgements about it from their particular perspectives (see chapter 1). They are the learners and their families, the employers and post-school institutions, the decision-makers including politicians and the civil servants and also the professionals and experts. The lenses used to make these judgements are understandably different but the gulfs between them in South Africa may be unique.

The reality of an increasingly interdependent world and its views of us provide a fifth lens of significance to our success. The impact of globalisation, the growing human population, widespread poverty, global warming, struggling economies as well as rapidly diminishing natural resources, all indicate that we humans are now connected as never before and that our fortunes depend on our competence and the quality of our relationships with others. World expectations of us affect the partnerships we can undertake and the support we can gather. World judgements of us affect our credit rating, the exchange rate, our credibility, and the currency of our qualifications. There is no doubt that our education system is crucial to our standing in the world. We South Africans have not had a national discourse about education, hence the absence of understanding about its significance and the danger that we are in as a nation if we do not succeed in establishing a powerful Basic Education System on which to build the high level knowledge appropriate to the 21st century.

RECOMMENDATION: 2

A shared educational lens, aligned to the NDP, should be co-created by the four groups identified by Wedekind, with input from global partners, so that a coherent message backed by consistent leadership can inform the nation about our current

levels of competence, our educational needs and our knowledge aspirations. These aspirations must be shared and owned by all South Africans who must commit to supporting our educational project and developing the abilities needed for us to achieve the goal of 21st century competence.

3. THE SIGNIFICANCE OF THE NSC PASS FOR PATHWAYS AND DESTINATIONS

Currently there is only one pathway to the NSC: basic education offered through public schools and private institutions. Success in passing the NSC examination is of great significance as “dropping out of school or failing to obtain the NSC has serious labour market consequences”, argues Nic Spaul (2014, 2), because “there is no pre-NSC qualification that is widely acknowledged or accepted”. He adds that “A student who does not reach, write and pass the NSC, will have no strong proof of their educational status.” It is clear that failure to produce such evidence would make access to employment very difficult. This is confirmed by the 2011 National Census which reveals that the unemployment rate for 25 to 35 year olds who had “less than matric” (NSC) was 47% in 2011. This is much higher than for those 25 to 35 year olds who had a NSC (33%), a diploma or certificate (20%), or a bachelor’s degree or higher (8%).

With respect to levels of remuneration, Branson et al., (2009, 47) report that individuals in South Africa “who complete matric have earnings which at the mean; are between 40% and 70% higher than individuals with less schooling”. They disaggregate this and find that the return for those obtaining a diploma/certificate is even higher at between 170% and 220%. Not surprisingly, the average individual with a degree is rewarded with between 250% and 400% more than counterparts who have not completed the NSC.

Clearly, on average, there are significant economic returns to achieving the NSC, particularly because doing so provides access to our further education and training pathways. This greatly improves the chances of success in achieving higher levels of knowledge and skills which in turn greatly assist with finding employment. In addition to its labour-market importance, the NSC is used by all universities when determining admission and access to particular programmes.

Clearly, our culture does, to a large degree, reward those who have obtained the NSC, even if there are concerns about the quality of the pass level and the learners’ competence.

4. THE PROBLEM OF DROP-OUTS AND REPEATERS

While some achieve academic success and economic advantage through the NSC, the drop-out rate in South Africa's schools must be cause for deep concern. 1 168 581 learners began their journey to the NSC in 2002 but nearly half of them (48.1%) did not reach grade 12 in 2013 along with their 2002 peers. The drop-out and repeater rates from grades 10 to 11 and 11 to 12 are alarming in the extreme (Figure 5.7) and suggest that large numbers of learners are leaving or repeating in the years approaching the NSC examination.

Percentage increase/decrease in total number of learners in both ordinary public and independent schools in South Africa			
	Grade 10 (from Grade 9 previous year)	Grade 11 (from Grade 10 previous year)	Grade 12 (from Grade 11 previous year)
2011	+8%	-18%	-37%
2010	+12%	-17%	-34%
2009	+13%	-18%	-33%
2008	+12%	-19%	-35%

Figure 5.7: Indications of failure and drop-out rates Grades 10-12

We do not have enough information about what happened to all the members of a particular cohort to arrive at an accurate conclusion about the efficiency of the Basic Education System. We only have some information about how many repeated classes and eventually passed grade 12, how many died; how many emigrated; how many found work and how many chose other pathways of learning or how many just dropped-out and formed part of the group not in education, employment or training (NEETs) - the number of which is now claimed to be moving towards 4 million. It might also be sobering to note that had the entire 2002 cohort succeeded in arriving in Grade 12 in 2013, the system would have faced an extreme challenge in resourcing the additional number of learners in Grade 12.

RECOMMENDATION: 3

Regular cohort studies at strategic points are absolutely necessary to understand the factors which impact on the pathways and destinations of our learners in a rapidly changing environment. They must become a standard tool to better understand the effectiveness of our systems and to inform our strategies.

5. PATHWAYS FROM NSC

Of the 562 112 fulltime students who wrote the 2013 NSC examination, 439 779 passed. Of those who obtained the NSC, 30.6% passed at the Bachelor level, 30.8 % at the Diploma level and 16.8 at the Certificate level. Only 176 learners (0.03%) passed at the basic NSC level while 21.7% did not succeed in obtaining the NSC. The levels at which the NSC is passed have a strong impact on the pathways open to the learners and the choices available to them. The Bachelor's pass opens many doors to many pathways in many different institutions, from universities to universities of technology and TVET colleges as Figure 5.8 shows. It also opens pathways to internship, apprenticeships and the world of work.

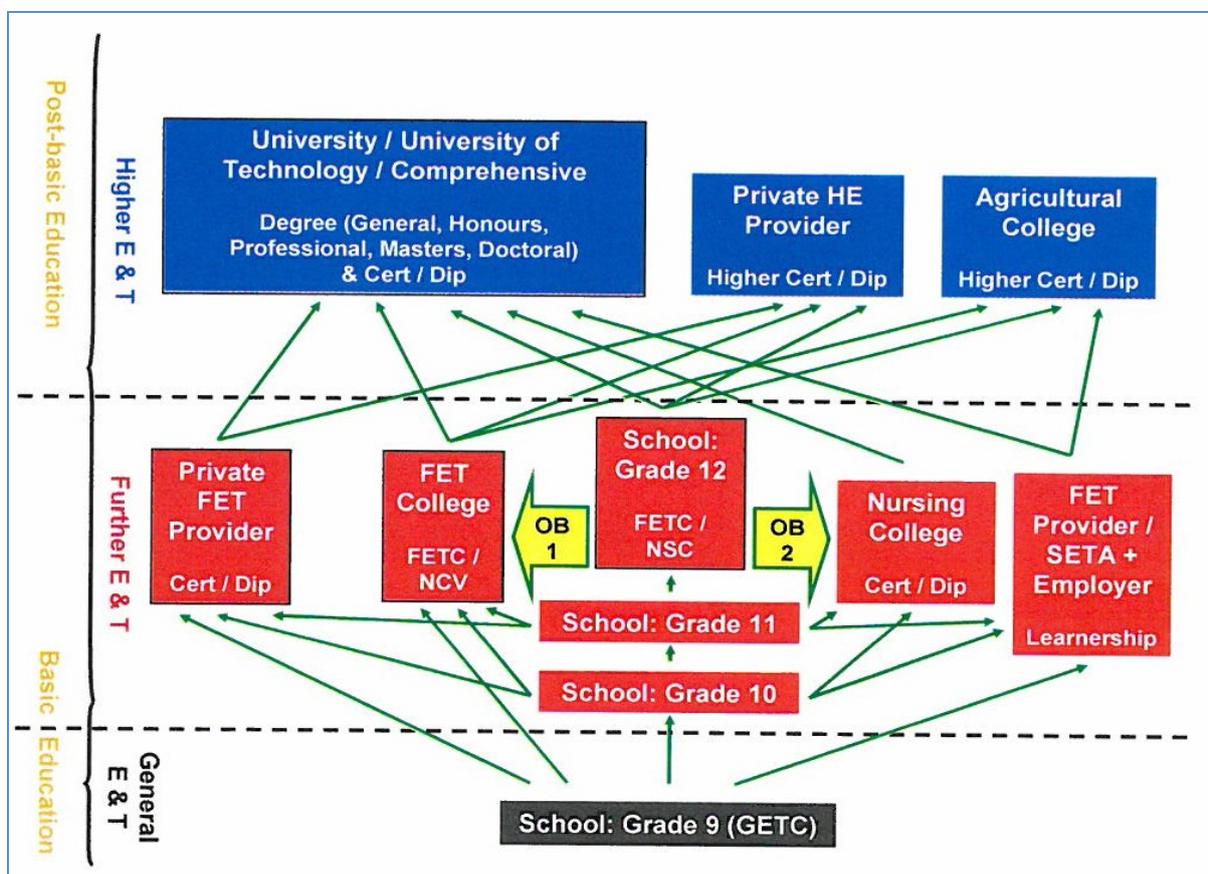


Figure 5.8: Existing Pathways from Grade 9 (Source: Cosser 2011, colour version by permission of the author)

Diploma passes essentially have pathways to universities of technology and to some universities which still offer these programmes. The Certificate pass opens a pathway to the Higher Certificate in universities and higher education colleges, but often the articulation to them is weak. Cosser's diagram shows that learners with the NSC have far greater access to further education and training both vertically and horizontally. The arrows marked OB1

and OB2 refer to the obstacles to further education and training for learners who do not have an NSC because “the majority of learners entering FET colleges, nursing training institutions other than universities and learnerships already have achieved the National Senior Certificate” (Cosser 2011, 74-75. He speaks of the “waste of human resource utilization” as most of these learners enter FET colleges and nursing colleges at levels lower than the NSC. What this also does is squeeze out learners who do not have the NSC leaving them with nowhere to go.

Nationally 171 755 (30.6%) obtained Bachelor’s passes in 2013 and the majority of these sought admission to universities. Jerome Bruner argues that cultures are knowledge amplification systems and you learn what the culture values by what it amplifies. Our culture has amplified the knowledge that university education has the highest status and that the nation’s education system should essentially be geared towards preparing learners for university. This is evident from the streams and curricula in the Basic Education Programme and from the fanfare which surrounds the NSC results.

Despite the success of Germany and other countries where vocational streams have won their place alongside university preparation programmes, in South Africa today our culture still amplifies the University stream as superior and as the first and most prestigious choice. This view needs to be challenged, and a more practical understanding of the different levels and streams of learning needs to be inculcated and affirmed. However, that will only happen if the culture begins to amplify the significance of vocational work for the welfare of the nation and if leadership validates this consistently. As academic success is lauded so should vocational success be, as is the case in many of the most advanced societies.

6. THE CURRICULUM FOR TECHNICAL HIGH SCHOOLS

Technical high schools have increasingly come under the spotlight since the new emphasis on vocational education as an important element of a post-school system which would better serve the development needs of our country, with special significance for our youth. They have considerable potential in offering a schooling pathway alternative to the dominant academic one. However, public perception is generally that they are second best. Learners who ‘cannot cope’ with the academic school curriculum are enrolled in the technical high school to follow a less demanding vocational direction. They have to suffer the stigma of being seen as ‘less smart’ than those who follow the academic path. The curricula of technical high school subjects bolster this view.

They are outdated and have not taken account of changes in the workplace with respect to equipment, workshops and other technological and theoretical advances. As a result, learners who exit at Grade 12 with the Technical NSC are seen as neither 'work ready' nor ready to enter higher education. Currently there are 200 technical high schools in South Africa with learners completing what would seem to be a 'dead-end' qualification.

The most immediate solution turns on better articulation. At the FET college roundtable discussions in 2010, stakeholders raised the question of what to do about the technical high schools. In the FET phase (Gr 10–12 or 16 years plus) the two kinds of institutions overlap considerably in the target group they serve. Better articulation is clearly needed. However, achieving it is a multi-faceted challenge. At a structural level, technical high schools fall under the DBE while FET colleges reside under the DHET. Technical high schools also have both the GET phase and FET phase of schooling as they offer Grades 8–12. To 'remove' vocational schooling from the DBE and place it under the DHET would require complete separation of function of technical high schools and FET colleges, limiting the technical high schools to Grades 8 and 9. A more profitable option would be for schools to offer curricula designed by two separate departments: Grades 8 and 9 using the DBE curricula and Grades 10–12 using those developed under DHET.

There are strong arguments for the NCV qualification implemented in FET colleges in 2007 being offered in the technical high schools. The NCV was developed as a modernised curriculum to replace the NATED courses, and to include fundamentals like language and Life Orientation as subjects. Currently there are about 16 NCV programmes offered by the FET colleges, ranging from Engineering to Business Studies, Tourism and Safety in Society. One suggestion is that instead of re-curriculating the technical high school curricula at great expense, these modern NCV programmes could simply be offered in both kinds of institutions under different conditions. As far as the schools are concerned, the NCV has a strong curriculum amenable to the kind of formal arrangements which a high school could provide through tightly structured full-time teaching hours, an appropriate assessment regime and an examination system organised collaboratively by DBE and DHET and certificated by Umalusi.

This would meet the needs of two different target groups. Colleges have increasingly been selecting post-Grade 12 learners for the NCV programmes, arguing that they have coped better with the learning demands because they are more 'mature'. Younger learners (post Grade 9 or 16–18yrs) who have transferred from academic high schools to the FET colleges have often not coped with the demands of studying in a mixed-age class and the 'freedoms'

that college life affords. This preference for learners who have already obtained the NSC has led, in many instances, to Grade 9 school-leavers not having a college option. There is thus an argument for these younger learners (post-Grade 9, or 16–18 years) remaining in a vocational ‘school environment’ with peers in the same age group.

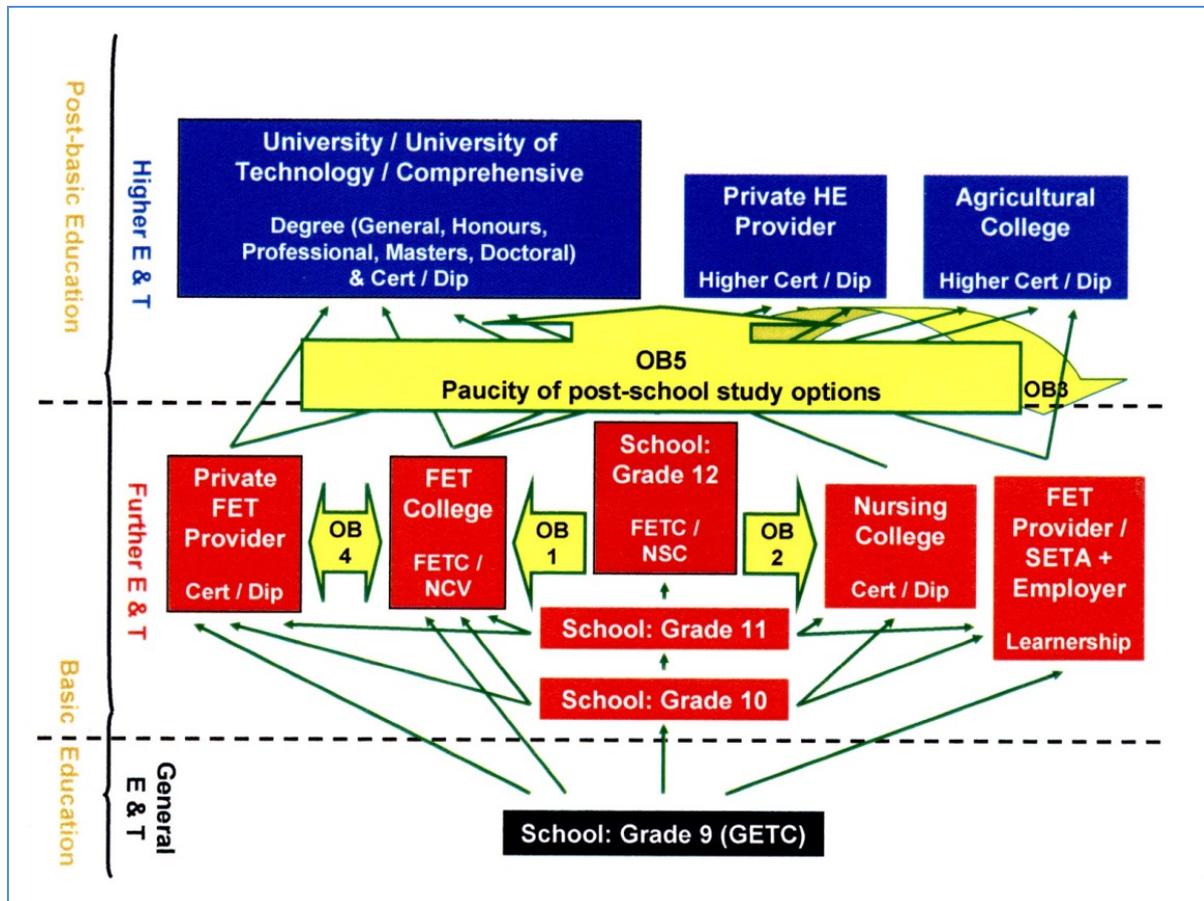


Figure 5.9 Obstacles to Access to Pathways (Source: Cosser 2011, colour version by permission of the author)

Cosser identifies three further obstacles to the pathways for school-leavers from Grades 9 to 12 (OB 3 to 5 in fig 5.9). These show the extent to which the Grade 9 to 11 leavers find themselves in competition with Grade 12 leavers while for all of these grades, including Grade 12, there is a paucity of study options.

Others, such as Magnus et al. (2013, 14) argue that the NCV curriculum is much too theoretical, especially with respect to Mathematics, and that at the very least a Mathematics curriculum appropriate to the needs of the different vocations should be created as part of the NCV programme (See Chapter 2).

The Centre for Development and Enterprise (CDE) (2012, 1) proposes that “One likely reason for the high dropout rate is that many believe that the available schooling will not assist them in finding a job.” Another reason for dropping out after Grade 9, they suggest, could be that the requirements of general education do not suit many senior secondary learners who would be better suited to a vocationally-oriented education. A third element is that not having a diversity of “appropriate and socially acceptable education pathways after Grade 9” is a major obstacle to making better choices about pathways to follow.

As Cosser (2011, 71) puts it, many “opportunities for further learning at levels 2 to 5 on the NQF, like teacher training and nursing colleges, have been disbanded ... and FET colleges have not succeeded in attracting learners. This means that universities loom disproportionately large in the post-school learner imagination”. This, together with the large number of FET college graduates who do not obtain employment, leads Cosser to propose a new model which he argues will produce “an expanded system of post-basic education and training in South Africa” (Figure 5.10).

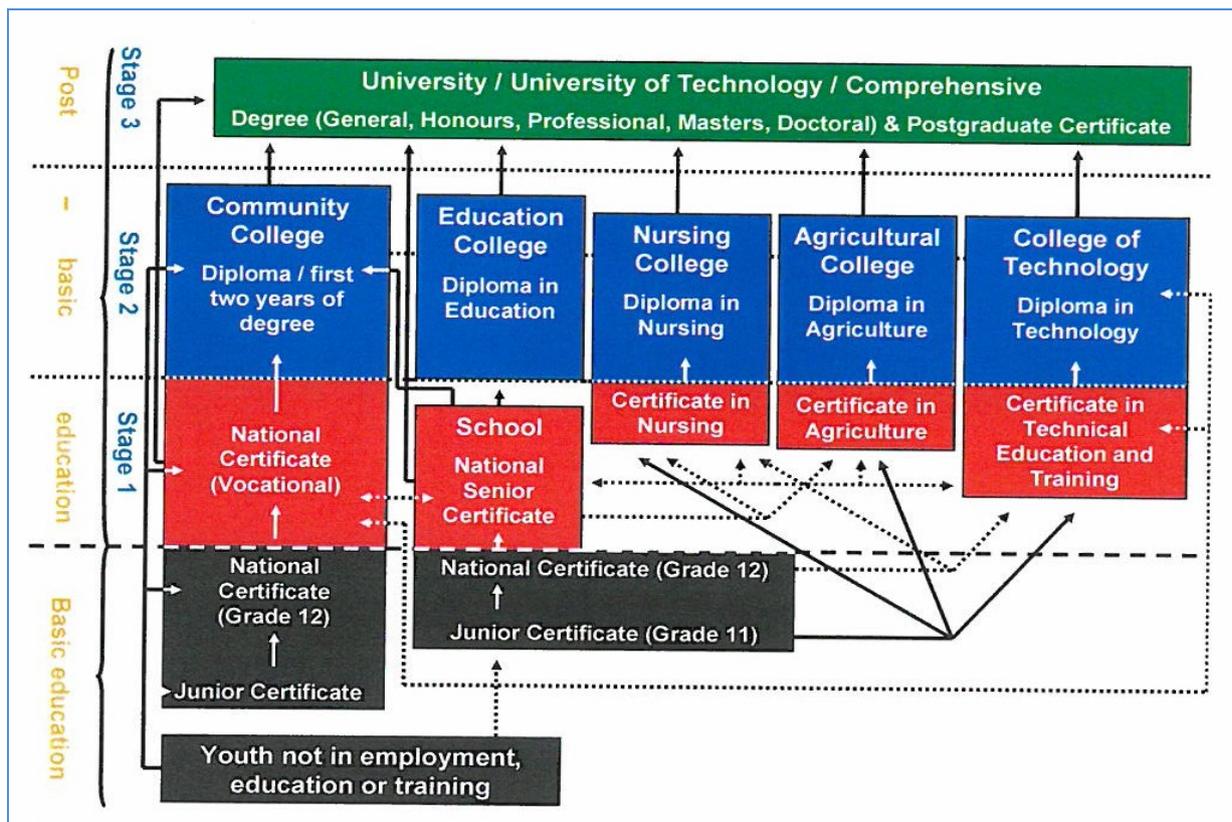


Figure 5.10 (Source: Cosser 2011, colour version by permission of the author)

The fairly radical proposal by Cosser is that there should be a Junior Certificate exit point at Grade 11. The rationale for this is that there should be more than one exit point which leads to different pathways and that at Grade 11 learners would be mature enough to make these

choices. There is merit in each of these models and It is clear that South Africa needs to strengthen vocational and vocationally-orientated education and expose our learners to vocational possibilities. The challenge is to build respect for vocational education, creating many pathways from school to ever higher levels of it, thereby beginning to restore the balance currently skewed in favour of university education.

RECOMMENDATION: 4

As a first step in the renaissance of vocational education in schools DBE should introduce a revised/reformed NCV qualification appropriate to the needs of the specific vocations in Technical High Schools. This would provide a basis for Post-school Education and Training and DBE jointly to investigate and develop the goals and pathways that connect general education with vocational and vocationally-orientated education across the nation's education and training system.

7. THE NEED FOR AN EXIT CERTIFICATE FOR GRADE 9 LEARNERS

Currently learners who exit from Grades 9 to 12 leave school without any record of their achievements other than their reports which do not serve as credible documents. With respect to education our constitution states that:

- (l) Everyone has the right
 - (a) to a basic education, including adult basic education; and
 - (b) to further education, which the state, through reasonable measures, must make progressively available and accessible.

The basic education to which everyone has a right has been pegged at Grade9, with education after that being labelled Further Education, which is at the discretion of the state. It would seem then that Grade 9 presents all South Africans with a moment to pause to reflect on the pathways available to them. This is even more necessary now that the Post School Education system to be developed in collaboration with DBE will be creating additional pathways, vertically and horizontally.

An important role for Lifelong Learning would be, through career planning, to assist learners to reflect on the pathways that they would wish to take given their interests and strengths. These pathways and destinations should be linked to careers connected to South Africa's National Development Plan (NPC 2013). The stigma that now accompanies early exits from school into the world of work or into education and learning institutions other than universities will in this way be challenged.

RECOMMENDATION: 5

- (a) That an exit certificate for Grade 9 be created to facilitate the learners' decision-making with respect to available pathways. This will provide learners with exit credentials from school should they choose to leave and entry credentials for whatever pathway and destination they aspire to.**
- (b) That the pathways available after Grade 9 in a changing post-school environment be researched**

8. RECOGNITION OF PRIOR LEARNING AND OPENING PATHWAYS ACROSS THE WHOLE EDUCATION AND LEARNING SYSTEM

The White Paper for post-school education and training (DHET 2013) sets out the vision and principles for the articulation and development of the post-school education and training system in South Africa. The vision is one of an integrated system with a diverse range of institutions all contributing to a "coherent but differentiated whole". The focus is clearly on building the scope and quality of provision in the TVET and Community College institutions.

The White Paper is concerned to provide for the large numbers of young people and adults who have not followed conventional learning pathways through the school system into formal employment, many of whom require alternative routes to secure recognition and to access new learning in the post-school system. Recognition of Prior Learning (RPL) is a practice for helping to optimise recognition and access to learning programmes and qualifications at this level in the system. The White Paper recognises that RPL policies supported by quality RPL practices will have to be set up to cover all institutions and programmes in the system to address issues of alternative access to learning programmes and the articulation of knowledge and course outcomes in a differentiated system.

RPL is not a panacea that will allow South Africans to transcend the apartheid education and training past and, on the basis of people's work experience alone, gain them higher positions and remuneration. It is a tool for improving access and articulation. Experience and research suggests that both of these issues are epistemologically and pedagogically complex and cannot be reduced to a simple set of assessment principles and practices. Indeed RPL is best understood as a pedagogical practice that provides non-traditional learners with the advice, language and skills they need to navigate between different learning pathways and practices, including assessment practices, in the system, e.g. between community or work-based practices and those of the college, university or professional body. This is true regardless of what level, programme or qualification one is navigating or being assessed against.

The White Paper, unfortunately, says little about the resources, including staff and specialised administration systems required to establish and expand the provision of RPL practices at (or amongst) all institutions in the Post-School System. Without such resources, RPL will remain largely rhetoric and will not be provided on a large scale at institutions in the system.

Further, the White Paper does not pronounce on the merits and relative costs of various RPL programmes and services. Different RPL practices offer different economies of scale, and in some cases, prove less efficient than following the conventional routes. Clearly, a thoroughgoing investigation of the possibilities is necessary to make RPL affordable and to give substance to the laudable intentions of the White Paper. Two of the possibilities to be considered are regional RPL information and advising centres and how these could add value to the post-school applications system; and the introduction of Learning Portfolios, a practice which has been tried and tested at one of our universities and which could be usefully introduced for non-traditional students at TVET and Community Colleges.

The Portfolio Development Course, as run at the University of the Western Cape, could be modified as part of an alternative access course (credit bearing or not) for learners at the colleges. Such a course would provide learners with the tools (literacies and technologies) they need to document their prior knowledge and to navigate their way through different assessments or into new learning programmes. These Learning Portfolios could also be captured and updated in secure electronic formats, and serve as a record of lifelong learning.

RECOMMENDATION: 6

In line with the thinking of the White Paper, RPL should be brought into all the main education pathways to enable all South Africans to have access to opportunities to improve their levels of competence, to access learning opportunities, and so to contribute to building a 21st century learning culture. This recommendation relates to the entire national education and training system with all of its possible pathways and destinations where appropriate, and requires careful consideration of scope and resourcing before implementation.

CHAPTER 6

SCHOOL-BASED ASSESSMENT

School Based Assessment (SBA) is a compulsory component of assessment for the awarding of the National Senior Certificate (NSC). It constitutes 25% of the final promotion mark in examinable subjects, while the external written examination component counts 75%. Life Orientation is the only compulsory NSC subject that is internally assessed, i.e. for which SBA constitutes 100%.

1. PROBLEM STATEMENT

School Based Assessment is perceived by many in the education community as having a negative effect on the quality of the NSC qualification, with the credibility of SBA marks themselves seen as questionable. In their presentations to the Ministerial Committee on the NSC, Teacher unions and quality assurance bodies such as Umalusi and the Independent Examinations Board (IEB) all pointed out the need to improve both the validity and reliability of SBA. Over a number of years, Umalusi annual reports have revealed weak correlation between the final examination and raw SBA marks. It is also known that SBA mark inflation is concentrated in certain schools, and that variation in mark inflation between subjects is quite pronounced.

Submissions by various organisations to the Ministerial Task Team suggest that teachers' inadequate professional knowledge is a major cause of the uneven standard of SBA, both as a teaching and learning tool and as an element in the final NSC mark. Umalusi has repeatedly reported problems in the application of SBA related to widespread tendencies in schools to design assessment tasks with low cognitive demand, employ inappropriate marking methods, and conduct poor moderation of assessments.

2. THE STATUS QUO IN SCHOOL-BASED ASSESSMENT

School Based Assessment is practised across the education system. It is intended to be used for two main purposes: 1) To provide formative feedback to learners, teachers and parents about what the learners know, understand and can do, and so to promote learning; and 2) To provide information for learner certification or promotion, broadening the assessment base and overcoming some of the shortcomings of an inevitably stressful examination system. SBA assessments are processed and managed across a number of

levels of the education system. A mark based on them is taken as an element of the final NSC mark. The processes that lead to SBA's inclusion in the final NSC mark are complex and increasingly rigorous, involving schools, departments and Umalusi. Their purpose is to improve the reliability of the assessments.

At classroom level, teachers are expected to use SBA as a technique to track and reinforce learners' grasp of the curriculum that is being mediated. They have to integrate assessment into their learning and teaching activities. Subject heads and principals then have to guide and quality-assure this assessment. Subject and curriculum advisors at district, provincial and national level have to carry out further quality assurance and moderation. The final step in the management of SBA is carried out by Umalusi, which carries out various types of analysis of SBA processes and marks. The common objectives running through these processes are to improve the effectiveness of SBA as a teaching and learning tool, and to present SBA marks that are valid and reliable.

3. THE ROLE OF UMALUSI IN SBA

Umalusi carries out a range of quality assurance and quality improvement activities at the various stages of the SBA cycle. It annually reviews SBA processes and marks in a sample of subjects in order to produce a report on the implementation and management of the SBA. The annual reports make useful suggestions regarding the improvement of SBA processes, mostly relating to process and subject content. The reports are discussed by the Department of Basic Education and its provincial counterparts who are responsible for managing the implementation of SBA. Umalusi also conducts provincial workshops which have demonstrably improved SBA management practices.

All the raw SBA scores are submitted to Umalusi after they have been moderated by the Department of Basic Education at the various levels. Umalusi in turn effects statistical adjustments of the marks per subject, based on schools' distribution of scores and the final standardised examination mark achieved by each school. It follows from this statistical adjustment process that the value of the SBA mark in the final certification mark is not 25% of the raw SBA mark, but 25% of the standardised SBA mark.

However, these processes are riddled with systems challenges, some of which are listed below.

- (a) Weak assessment practice is concentrated in certain schools and mark inflation tendencies vary between schools and subjects.
- (b) Because of the importance of the promotion objectives of SBA to the teachers and learners, the formative assessment aspect tends to be under-emphasised.
- (c) Inflated SBAs impede learning and send a wrong signal to learners and their parents about how ready the learners concerned are for the NSC examinations. Most learners perform significantly better in SBA than in external examinations.
- (d) The content assessed by SBA and by examinations is the same. This approach results in inefficiencies. Consideration should be given to distinguishing content that is the focus of SBA from what is examined for promotion purposes. This would also broaden the assessment base.
- (e) The tasks covered by SBA are varied, as teachers would like to protect their independence as professionals with some space for discretion about what and how to teach and assess. While the appeal to professionalism is desirable, that very professionalism must demand a response both to the significant inadequacy in the cognitive demand of the questions set by many teachers and to the weakness in marking.
- (f) The feedback to schools from the moderation carried out by Umalusi and the DBE seems to be weak or non-existent. Since 2013, Umalusi has conducted workshops at provincial level to provide feedback. However, the feedback appears to be lost in many cases between district subject advisors and schools. This is partly caused by the poor capacity of the districts, often indexed by a high ratio of schools to subject advisors.

4. KEY OBSERVATIONS

School Based Assessment raised the NSC pass rate by 3.5% in 2013. That is significant. However, there would be no point in including SBA in the final mark if it did not represent a corrective to the deficiencies of high-risk assessment and broaden the assessment base. The real issue is the reliability of SBA. Final SBA marks are based on significantly adjusted marks following Umalusi's statistical moderation processes, and, in the end, the adjusted

SBA relates within tightly controlled parameters to the examination mark. As implementation has improved, SBA's contribution to the pass rate has declined and its value as a corrective and as an educational tool has increased. For all the difficulties, it does not have an undue effect on the quality of the NSC pass.

4.1 *There have been some improvements in management of the quality of the SBA*

The national and provincial departments of education have, over the years, improved the quality control and assurance processes. However more needs to be done. To improve the credibility of SBA as an aid to better teaching and learning and as a record of achievement outside the stress of the examination room, the provincial departments of education have begun carrying out the moderation processes early in the year. This gives schools time to institute corrective measures. Umalusi has lauded the DBE for the continuous improvement in the planning, implementation and feedback of the moderation processes.

4.2 *The dual role of School Based Assessment currently works against quality improvement efforts*

The dual role of SBA, as both a learning and teaching technique and as a promotion/certification measure has to be clarified in practice. It is currently creating problems among teachers, learners and parents. Teachers tend to prioritise the promotion role of SBA over that of learning and teaching. This may be a driving force behind the tendency to inflate the SBA marks. Inflated SBA marks deceive both learners and parents into believing that learners are better prepared than they are and that they will do as well in their final examinations. This may reduce the effort put into the final examination.

5. TO CHANGE OR NOT TO CHANGE THE PRACTICE OF SBA

Most of the organisations that made submissions to the Task Team maintain that SBA as an element in the promotion requirements for the NSC has potentially good educational value. Where properly used, SBA enables teachers and education managers to effectively monitor learners' progress, thereby providing a basis for improving the quality of learning and teaching in classrooms. Some submissions, however, argue for a complete scrapping of the SBA component of the final mark or for a reduction of its weighting. Doing away with the

SBA component of the final mark would open up as many problems as it solved, and could undermine current improvement processes in learning and teaching. Even reducing the weighting of SBA as a proportion of the final mark would diminish the importance of SBA for teachers.

The Task Team therefore wishes to make the following set of recommendations both to improve the use of SBA for learning purposes and to safeguard the quality of the NSC:

6. RECOMMENDATIONS

6.1 Retain the 25% weighting of SBA in the final mark on condition that Umalusi's standardising role and capacity to make adjustments is sustained

This recommendation is made on the understanding that the final SBA mark will be in an acceptable and closely monitored relation to the moderated examination mark. The assumption is not that they should be the same, but there has been clear evidence of significant inflation in some schools. With improved monitoring in schools and rigorous Umalusi monitoring, mark inflation has been reduced. The influence of the SBA on the pass rate has been declining since 2010 (from 5.1% in 2010 to 3.5% in 2013 – see chapter 7). It will continue to need on-going, rigorous attention

6.2 DBE must build on and enhance its efforts to strengthen SBA

The whole value chain involved in implementing SBA needs to be strengthened by:

6.2.1 Stepping up the accountabilities of the various implementers and managers. Principals and heads of subjects in schools must be held more accountable for the validity and reliability of SBA;

6.2.2 Increasing the resourcing of the SBA system, particularly providing an adequate number of well-equipped subject advisors, and

6.2.3 Further standardising the SBA processes. Part of each of the assessment frameworks should be standardised nationally or provincially to increase validity. The actual design of tasks should still be left to the individual teachers.

6.3 More action-oriented research and evaluations should be conducted on regions and subjects that show a greater tendency to inflate SBA marks

More targeted analysis should be carried out in the provinces and regions that have demonstrated a particularly low correlation between their SBA and examination marks. Such analysis and resulting actions should continue until the necessary standards are met.

CHAPTER 7

STANDARD AND QUALITY OF THE NSC EXAMINATION: PROCESS AND OUTPUTS

INTRODUCTION

In its Terms of Reference, the Ministerial Committee was charged with establishing the main criticisms of the National Senior Certificate. Through an analysis of the standard and quality of the main processes in the examination cycle, this chapter explores and addresses the most prominent of those criticisms, the perceived poor standard and quality of the qualification. The evaluation of processes is a crucial foundation for comment on the standard and quality of the NSC.

For the purposes of this discussion, the term standard relates to content, while quality relates to fitness for purpose. Content is primarily concerned with the curriculum. However, the curriculum may mean at least three things: the *intended curriculum*, which is what society wants taught, the *implemented curriculum*, what is taught in the classrooms, and finally the *attained curriculum*, what learners actually learn. In this investigation, the focus lies largely on the attained curriculum, with some attention being paid to the intended curriculum (see chapters 2, 3 and 4 with regard to Mathematics, English First Additional Language, and Life Orientation, respectively). Very little attention is given to the implemented curriculum, as falling outside the scope of the investigation. Following its terms of reference, the committee narrowed its investigation largely to the attained curriculum in terms of reviewing standards and quality.

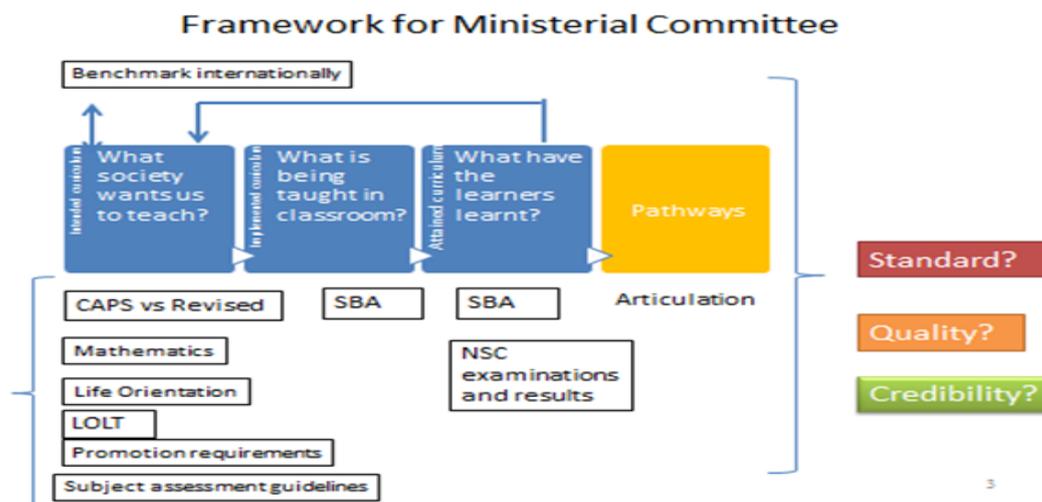


Figure 7.1: Framework for Ministerial Committee

In evaluating the standard as related to the content of the NSC, it is essential to review the principles upon which the qualification is based in addition to the explicit outcomes intended. Both of these are articulated in the NSC curriculum document.

The following guiding principles, which include elements of social justice, quality and competence measures, and systemic features such as articulation, underpin the curriculum in Grades 10–12 (DBE 2011a, 11):

- (a) Social transformation;
- (b) Outcomes-based education;
- (c) High knowledge and high skills;
- (d) Integration and applied competence;
- (e) Progression;
- (f) Articulation and portability;
- (g) Human rights, inclusivity, environmental and social justice;
- (h) Valuing indigenous knowledge systems, and
- (i) Credibility, quality and efficiency.

The Curriculum's Critical Outcomes require learners to be able to:

- (a) Identify and solve problems and make decisions using critical and creative thinking;
- (b) Work effectively with others as members of a team, group, organisation and community;
- (c) Organise and manage themselves and their activities responsibly and effectively;
- (d) Collect, analyse, organise and critically evaluate information;
- (e) Communicate effectively using visual, symbolic and/or language skills in various modes;
- (f) Use science and technology effectively and critically showing responsibility towards the environment and the health of others, and
- (g) Demonstrate an understanding of the world as a set of related systems by recognising that problem solving contexts do not exist in isolation.

These outcomes reflect some of the 21st Century competencies required internationally, such as communication, working in teams, problem solving and critical thinking.

The curriculum also specifies Developmental Outcomes (DBE 2011a, 12). Learners are required to be able to:

- (a) Reflect on and explore a variety of strategies to learn more effectively;
- (b) Participate as responsible citizens in the life of local, national and global communities;
- (c) Be culturally and aesthetically sensitive across a range of social contexts;
- (d) Explore education and career opportunities, and
- (e) Develop entrepreneurial opportunities.

The critical and developmental outcomes are set in the context of a broader ethical vision:

Values and morality give meaning to our individual and social relationships. They are the common currencies that help make life more meaningful than it might otherwise have been. An education system does not exist to simply serve a market, important as that may be for economic growth and material prosperity. Its primary purpose must be to enrich the individual and, by extension, the broader society. (DBE 2011a, 12)

Accordingly, the kind of learner envisaged as emerging from the education system “is one who will be imbued with the values and act in the interests of a society based on respect for democracy, equality, human dignity and social justice as promoted in the Constitution.”

In addition, learners emerging from the Further Education and Training band must:

- (a) have access to, and succeed in, lifelong education and training of good quality;
- (b) demonstrate an ability to think logically and analytically, as well as holistically and laterally, and
- (c) be able to transfer skills from familiar to unfamiliar situations.

(DBE 2011a, 15)

All of the values expressed in the principles, outcomes and vision are socially and globally relevant and appropriate and serve as a good foundation for the content of a curriculum.

Having outlined the foundations of the curriculum, we set it in historical context.

2. EXAMINATIONS IN SOUTH AFRICA

South Africa has a long history in administering public exit examinations. The University of the Cape of Good Hope conducted examinations in the 19th century and up to 1917. Thereafter the Joint Matriculation Board (JMB) of the South African universities was established. Examinations became a provincial responsibility and the JMB was the public examination body that served as the arbiter of standards until 1992 when the South African Certification Council (SAFCERT) was established and a centralised certification process was put in place. Since 1994, there has been an increase in the number of enrolments, although the growth has not been linear. The pass rates have also varied across years. Because of changes in the system, as explained below, those between 1994 and 2007 are not directly comparable with those between 2008 and 2013. However, comparisons can reliably be made between years from 2008 onwards.

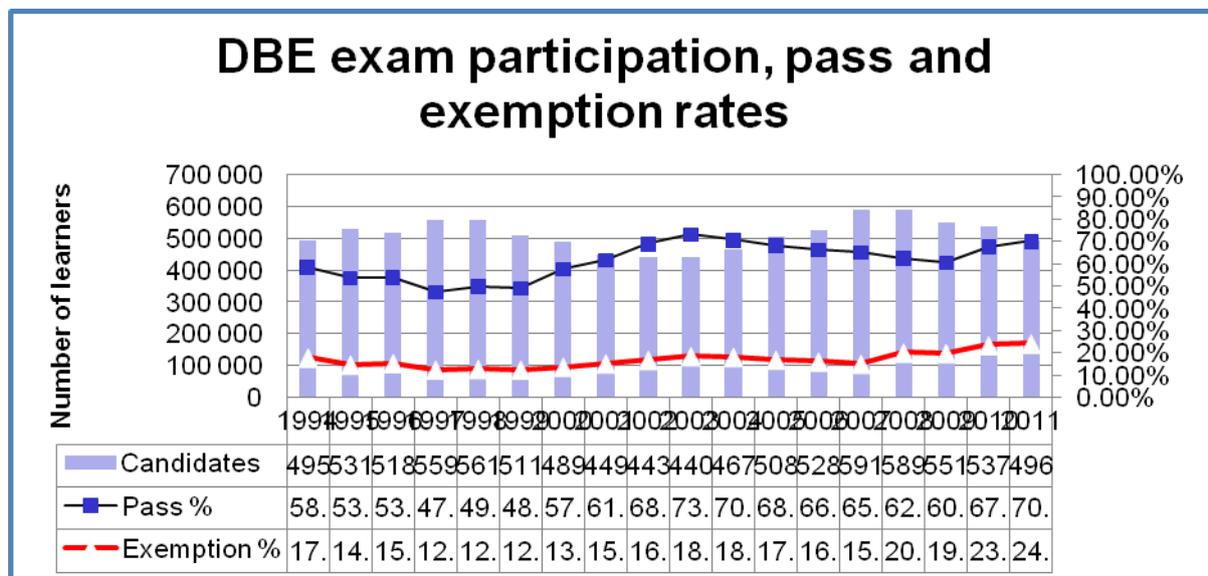


Figure 7.2: Pass rates Senior Certificate and National Senior Certificate (Source: Umalusi presentation October 2013)

Under Minister Bhengu (1994–1998), a provincially set examination system was in place alongside changes in the structure of education and the powers of the national department. In 1994, 495 408 candidates entered for the SC examinations.

Under Minister Asmal (1999–2004) the number of registered candidates dropped from 511 474 (first year of office) to 440 267 (final year in office). In 2001, examination papers in five subjects were set for the first time nationally. Continuous assessment (School Based Assessment) was also introduced as 25% of the final mark as a feature of outcomes-based education. However, problems emerged. In that year there were widespread leaks of examination papers. In 2003 the 73% pass (from 49% when Asmal took over in 1999)

aroused public scepticism about the standard of examinations and suspicions about inflated results and political manipulation. Partly in response to the concerns about standards, the university vice-chancellors started to explore their own entrance examination. A new quality assurance body, Umalusi, emerged to replace SAFCERT. As an earnest of transparency, it released raw marks and adjusted marks for the first time.

In 2004 Minister Pandor was appointed and 467 985 learners enrolled to write the SC examinations. However, major problems were revealed in Mpumalanga and the results were withheld pending an investigation into the examination results. In 2005, the 508 363 learners who started in 1994 wrote the SC, the largest cohort since 1999. In the same year, Umalusi officially became responsible for examinations as a whole. In 2006, Madiba's Children, who started school in 1995, were the first SC candidates to write examinations based on OBE as framed in the National Curriculum Statement. In the same year, an announcement was made of a plan to implement the Further Education and Training Certificate and of the intention to remove the Higher Grade and Standard Grade differentiation from the examination system.

In 2007, a national milestone was reached with the implementation of nationally set examinations. It was the first time all candidates were exposed to a common standard in all subjects. An international evaluation of exemplar question papers was undertaken on the initiative of the Department by Cambridge International Examinations, the Scottish Qualification Authority and the Board of Studies New South Wales. However, the results were not revealed, either publicly or to Umalusi. The numbers reached new heights when 546 775 wrote the SC examinations. The next year, the first group of Grade 12 learners wrote the NSC examinations based on the Revised National Curriculum.

In 2009 Minister Motshekga was appointed and a record 552 073 learners wrote the NSC examinations. In 2011 an international evaluation of 15 question papers from 2010 was undertaken by the same three authorities (Cambridge International Examinations, the Scottish Qualification Authority and the Board of Studies, New South Wales). Once again, the evaluation was neither shared with Umalusi nor made public. In 2012, another milestone was achieved when 73.9% of the 511 152 who wrote the NSC examinations passed – a level not seen since 2003 under Minister Asmal.

Shortly thereafter, in 2013, the Ministerial Committee now reporting was appointed to investigate the standard and quality of the NSC. It, too was working in a context of change. The 2014 Grade 12 cohort will be the first to write NSC examinations based on the CAPS curriculum.

Year	1994	1999	2001	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Minister	Bhengvu 1994–1998	Minister Asmal			Minister Pandor					Minister Motshekga					
Event/s	Provincially set examination system; changes in power and structure of education		5 Subjects set nationally; Continuous assessment introduced as 25% of final mark; widespread examination paper leaks	73% pass rate public scepticism at height. Umalusi released raw marks and adjusted marks for first time, Vice-Chancellor's own entrance exam.	Mpumalanga SCE results withheld	Cohort of learners started in 1994. Umalusi comes of age and is responsible for examinations	Madiba's Children (started school in 1995) First Grade 12 class to write examinations based on OBE, NCS. Announcement of plan to implement FETC and announcement of removal of HG and SG	11 Nationally set examinations – first time all candidates exposed to common standard in all subjects. International evaluation (CIESQA, NSW)	National examinations first time; New curriculum first group of Grade 12 to write the NSC based on the Revised National Curriculum			International evaluation of 15 question papers	First group of learners "Born Frees" (1994)		First group of learners to write the new examinations based on Curriculum and Assessment Policy Statements (CAPS)
Enrolment figure	495408	511474	449371	440267	467985	508363	528525	546775	533561	552073	537543	496090	511152	562 112	
Pass rate	58	49	62	73	70.7	68	66.6	65	62.5	60.6	67.8	70.2	73.9	78.2	
Access to university %	18	13	15	19	18	17	16	15	20	20	23.5	24.3	26.6	30.6	
Access to university number	88497	63725	67707	82010	85117	86531	85830	85454	107274	109697	126371	120767	136047	171755	

Figure 7.3: Historical summary

3. EVALUATION OF THE EXAMINATION PROCESS AND ITS QUALITY

In order to review the standard and quality of the NSC examinations, it is necessary to evaluate the processes in the NSC examinations cycle. The DBE process has four main components: Test development; Administration; Marking and moderation and resulting; and Analysis, certification and feedback. Responsibility for the activities (see Figure 7.4) varies as follows.

Activities	Organisation responsible
Test development	National Department of Basic Education
Administration,	Provincial Departments of Education
Marking	Provincial Departments
Moderation	National Department of Basic Education and Provincial Departments
Resulting	National Department of Basic Education and Provincial Departments
Analysis	National Department of Basic Education and Provincial Departments
Certification	Umalusi
Feedback	Provincial Departments
Quality assurance of examination process	Umalusi

Figure 7.4: Responsibility for processes in the NSC examination cycle

The processes that the National Department of Basic Education engages in are illustrated in the Figure 7.5 below:

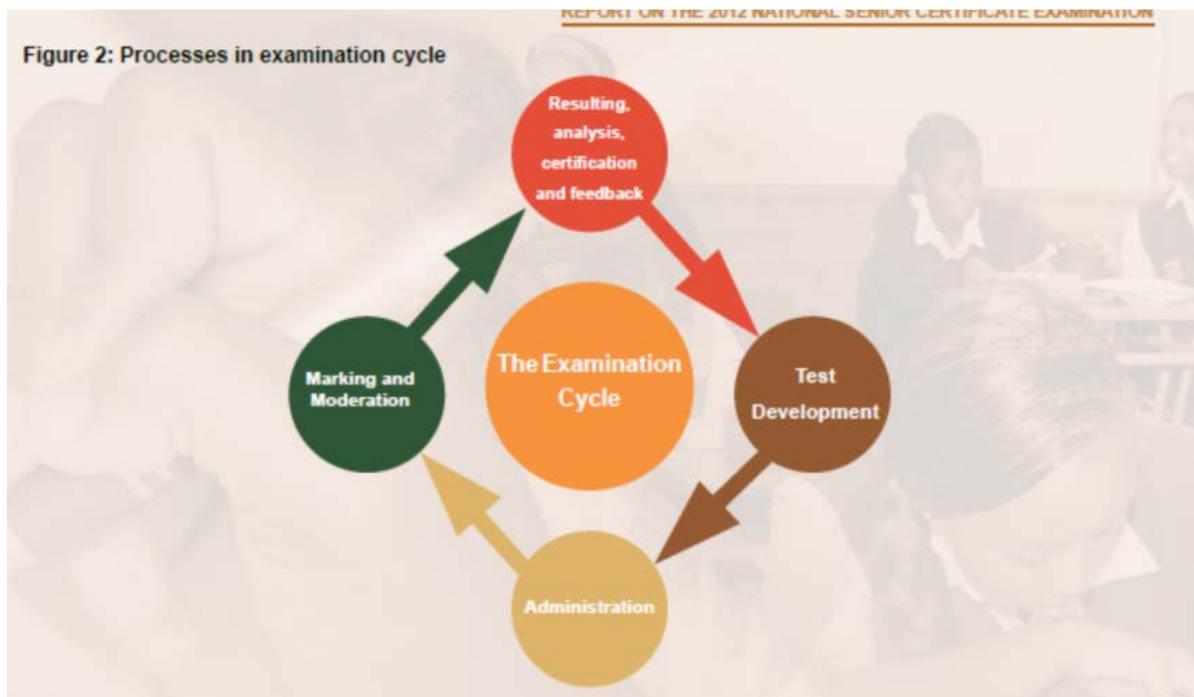


Figure 7.5: Processes in the DBE examination cycle for NSC (Source: DBE)

In the test development process, there are six main steps (see Figure 7.6 below)

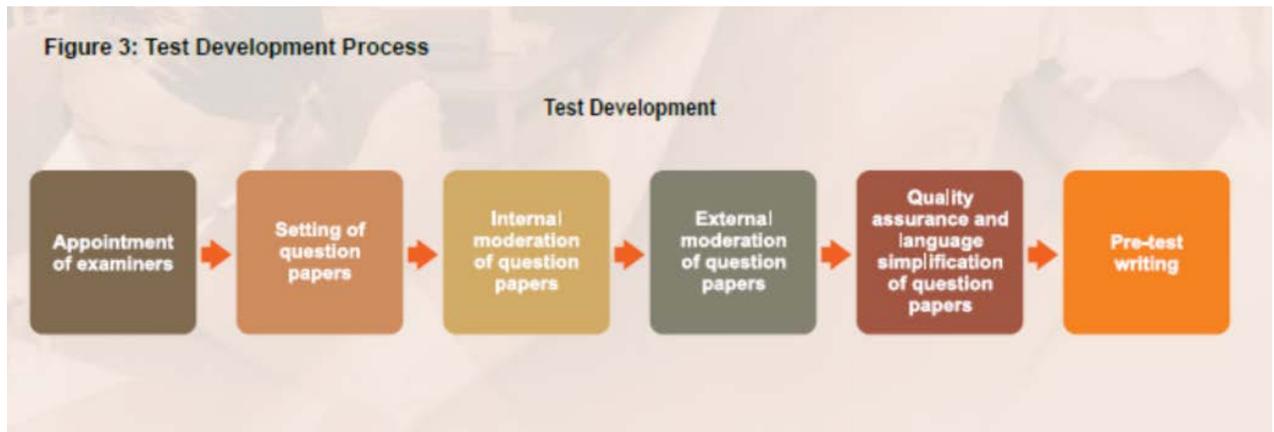
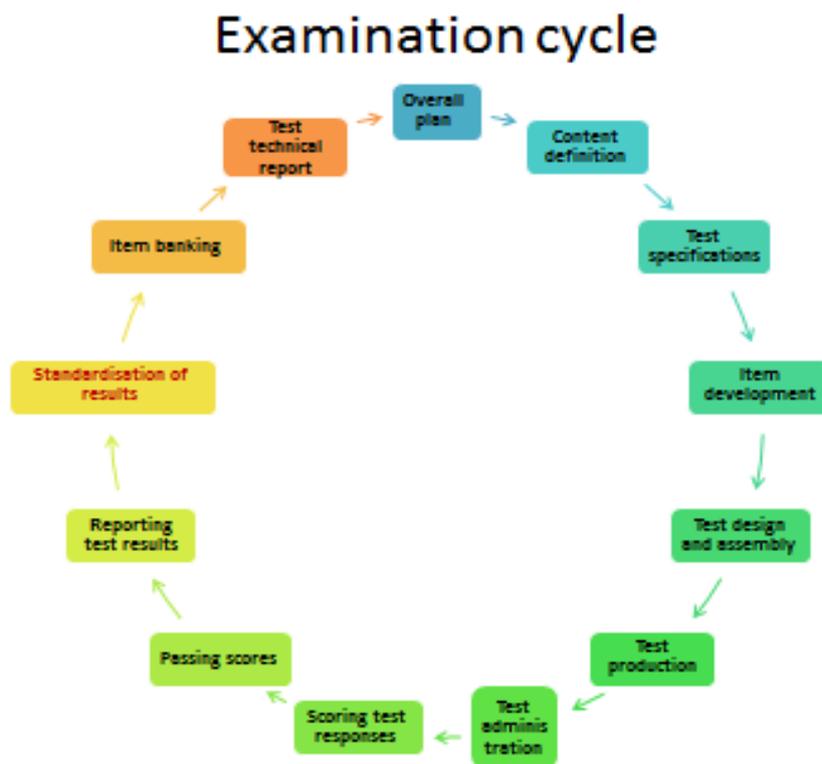


Figure 7.6 Test Development Process for NSC (Source: DBE)

The examination cycle outlined below reflects best practice as it is described in the international literature. It is illustrated in Figure 7.6, and outlined in some detail in Figure 7.7, with its criteria for quality elaborated.



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Figure 7.7: The main components of an examination process internationally

Component	Criteria for quality
Overall plan	Systematic guidance for all test development activities constructed, desired test interpretations, test format, major sources of validity evidence, clear purpose, desired inferences, psychometric model, timelines, security, quality control
Content definition	Sampling plan for domain, various methods related to purpose of assessment, essential source of content-related validity evidence, delineation of construct
Test specifications	Operational definitions of content, framework for validity defensible sampling of content domain, norm or criterion referenced, desired item characteristics
Item development	Development of effective stimuli, formats, validity evidence related to adherence to evidence-based principles, training of item writers, reviewers, effective item editing,
Test design and assembly	Designing and creating test forms, selecting items for specified test forms, operational sampling by planned blueprint, pre-testing considerations
Test production	Publishing activities, printing or CBT packaging; security issues, validity issues concerned with quality control
Test administration	Validity issues concerned with standardization, ADA issues proctoring, security issues, timing issues
Scoring test responses	Validity issues, quality control, key validation item analysis
Passing scores	Establishing defensible passing scores, relative vs absolute, validity issues concerning cut scores, comparability of standards. Maintaining constancy of score scale (equating, linking)
Reporting test results	Validity issues: accuracy; quality control; timely; meaningful; misuse issues; challenges; retakes
Item banking	Security issues; usefulness; flexibility; principles for effective item banking
Test technical Report	Systematic, thorough, detailed documentation of validity evidence; 12-step organization; recommendations

Figure 7.8: Examination design, development and implementation process (Adapted from Linn 1999)

Using this as the basis for an evaluation of the South African examination system for the NSC, a number of observations were made. Each component is discussed briefly below.

Since the national examinations were first introduced in 2007, there has been a steady improvement in the conduct of the examinations and the quality of the data emerging from the process. However, there are still some serious, possibly compromising flaws in the system that affect the validity and reliability of the examination data. These reinforce some of the credibility problems and feed into the main criticisms of the system.

3.1 Overall Plan for the Examination Process

It is good practice for every examination system to have an overall plan for the examination process. It is important for systematic guidance for all test development activities, desired test interpretations and test format, and it is important as specifying the major sources of validity evidence, clear purpose, desired inferences, psychometric model, timelines, security, and quality control.

The DBE has a management plan for the overall functioning of the Department for Examinations and National Assessments. This includes planning for the NSC examinations. Once the DBE has an approved plan for the NSC examination process, it is disseminated to the provinces, which are responsible for implementing the examinations. The provinces augment this with their own plans to meet local circumstances.

Effective planning is crucial to the DBE. The failure over the past six years to comply with the 18 month cycle prescribed by Umalusi has had serious consequences. Time pressure through not adhering to the cycle has been a significant source of error and flaws in the system. Umalusi's standing request is for a cycle of 18 months to make appropriate timelines possible and so to promote valid and reliable construction of examination processes.

We were not able to establish whether DBE's national and provincial plans now provide for the 18 month cycle prescribed by Umalusi. If they do not, we strongly recommend that planning documents be revised to provide for an 18 month cycle in the examinations process.

3.2 Content Definition

For every subject and examination, there should be clear definitions of content.

At present, each subject has learning programme guidelines and subject assessment guidelines (SAGs). However, external moderators and the international benchmarking evaluators sometimes report failure to observe these (e.g. in the 2010 Life Sciences examination paper). Furthermore, rubrics for subjects such as English First Additional language and some African languages as well as History do not provide adequate guidelines on how the papers should be assessed and marked.

It is recommended that all internal and external moderators are provided with clear guidelines on content and that these are clarified with them. Secondly, where content-related problems are identified, the rubrics used should be reviewed and adapted appropriately.

3.3 Test Specifications

Test specifications, or as in this case, examination specifications, are an essential ingredient in any test/examination design. Test specifications grids differ from assessment frameworks. Assessment frameworks are tools that describe the overall content and design of the subject area being assessed, while test specifications grids describe the detailed blueprint used for constructing the assessment. The test specification grids also provide the foundation for a coherent and internally consistent assessment that can be the basis for consistency across years in terms of standards.

In the NSC, such test specifications are not currently used, and the frameworks that are used are not sent either to the external moderators or to the external evaluators involved in the benchmarking processes. After repeated requests, a set of exemplar grids was eventually supplied to the Committee. These are referred to as analysis grids, but they resemble broader content frameworks rather than test specifications grids. They lack specification of the depth of content. For instance, the English First Additional Language Paper 1 analysis grid contained per question the cognitive level, as well as the learning outcome that was being assessed. This is an essential step in the process. However, for an external evaluator to evaluate the content, balance and format it is necessary to list per question what *cognitive level* the item is targeting, the projected *difficulty level*, the *outcome* and preferably a more specific *topic/concept*, the *format* of the item, the expected *time* needed to answer it as well as the *mark allocation*. This way many shortcomings identified by the international benchmarking reports and external moderators could be prevented at the outset, as the test design would be more transparent to those setting it. As good practice, it is recommended that every examination paper should have a detailed test specification framework as described above and that this be sent to external moderators and external evaluators along with the examination papers. This tool would alert the moderators and evaluators to the balance of the papers in terms of these aspects and provide a deeper insight into what the examination panel was trying to assess, thus making the assessment more transparent. The Committee noted that the benchmarking evaluators remarked on the absence of such a grid in several cases.

3.4 Item Development

The setting of questions⁴ and examination papers (Item writing and development) has come a long way in the past 20 years. In terms of quality criteria, there needs to be attention to the development of effective stimuli, formats, and validity evidence related to adherence to evidence-based principles, as well as considerable training of item writers and reviewers, and effective item editing. These things make for an effective quality system of examinations.

Such processes take time. Umalusi repeatedly reports that the Department of Education fails to comply with the recommended cycle of 18 months, which means that there is not enough time for appropriate processes. The implications have to be understood. The development of items is undertaken by an examination panel. This usually comprises 3 to 4 people, although some variation exists. There is often not enough time for adequate development of the items or refinement of the examination papers. As a result of the time pressure, papers are sent to external moderators late, annually causing quality problems in certain subjects. These problems manifest in content and format errors and have been reported in the public media.

While the Committee noted that there has been some improvement in the timelines for the papers being submitted and that there have been improvements in the content of examinations in certain subjects over time, it is clear that this is one area where significant quality improvement can be achieved by the relatively simple expedient of better scheduling.

Other issues related to item development for questions and papers emerge from the external benchmarking reports and Umalusi external moderator reports. They include:

- (a) Papers are very traditional and even old fashioned in their approach (e.g. 2010 Life Sciences and English First Additional Language).
- (b) Internal moderators are often not well-equipped to design papers and need more training in assessment. One consequence is that when a number of technical issues about item development are evaluated, it too frequently becomes evident

NOTES

⁴ The terms items and questions are used interchangeably in this chapter.

that the format chosen by the examiners is not consistent with the purpose of the items.

- (c) External moderators find too many typographical errors; there is too much reliance on external moderators in some subjects to “clean up” the final papers.
- (d) External moderators are often not good enough. Problems with papers sometimes emerge after the quality assurance process has been completed. However, in many cases the unreasonable time pressure appears to have played a role.
- (e) Examiners in certain subjects do not have adequate capacity, resulting in very poor quality items and external moderators sometimes have to assist with the refinement of items just to get the paper ready in time.
- (f) Poor quality of diagrams/graphic elements of papers in some subjects is an annual problem, unacceptable at this level of assessment.

It is beyond the scope of this report to describe and investigate the full extent of the problems with item development and construction of the examination papers in the NSC, but, in summary there are a number of quality problems and failures to follow appropriate practices. These should be addressed.

In particular, it is strongly recommended that:

- 1) The time scales for the development of items and papers be revisited, and that a more realistic time frame be established, coupled with the use of a test specifications framework/grid.
- 2) Stricter implementation of the quality criteria for being a moderator should be enforced. Currently there is too much reliance on external moderators of some subjects to “clean up” the final papers.
- 3) Intensive training in up to date techniques related to item development and test construction be shared with both the internal and external moderators.

- 4) The benchmark reports that clearly highlight serious flaws in the papers be shared with the internal and external moderators and be used in the professional development and quality enhancement processes. (See the full section on these reports below).
- 5) Umalusi improves the quality of some of the external moderators appointed using a high standard of quality criteria as a basis for appointment. External moderators would also benefit from further training on modern test development practices.

3.5 Test design and Assembly

Once the items have been designed, the examination papers still need to be designed and put together in various forms. This should be done in terms of the test specifications grid referred to earlier. It serves as the planned test blueprint. Once designed, items should be pre-tested to identify and discard those that are not suitable.

The NSC system is not yet following best practice in terms of its test development and formulation. Test specifications grids (as described earlier) are apparently not used and there is no pre-testing of items unless items are recycled from old papers, a practice which is discouraged.

A general recommendation is that more attention be given to the overall design of each paper, and that includes using a test specification grid. Many of the comments from the benchmarking reports remark on the overall design issues related to the examination papers. In addition, consideration should be given to the pre-testing of items as well as to item banking to improve the quality of the items and the papers overall. This would avoid the situation where clearly unsuitable items are discovered during and after the examinations.

3.6 Test production

The test production phase includes the publishing activities, printing, security issues, and validity issues concerned with quality control. These should all be specified, and standardised across all the production centres. One quality control problem recurs annually. It relates to the translation of all the examinations into Afrikaans. Every year

it is noted that the translation of papers has not been done professionally and is often incorrect, and that the language is sometimes incomprehensible. This causes validity problems. Given the excessive time pressure in the current examination cycle it is possible that in the rush to finalise the papers the Afrikaans translations do not receive the necessary quality control.

With the exception of the Afrikaans translations, there has been improvement overall in the NSC test production phase. The security procedures nationally have been tightened, particularly in the wake of Mpumalanga's results having to be withheld in 2004 and the national department's having had to take over the examinations directorate in that province. Few significant leaks have been reported recently.

However, inadequate quality control in the production phase continues to plague the system. Some provinces persistently make the same mistakes. Every year printing problems are reported. These are largely in subjects such as Geography and Life Sciences where printing is not standardised in the provinces and the papers are not checked sufficiently at provincial level before dissemination. This causes confusion that disadvantages the learners during the examinations. This is unacceptable.

While better security in the production phase has demonstrably been achieved, an intervention is required to improve the quality assurance of the printed papers, an area of weakness that threatens the validity of the examinations. Action is needed in provinces where this is an annual problem. This includes accountability for the quality control process and, in some cases, more resources and better capacity to check the quality of printed papers prior to distribution.

3.7 Test Administration

In national examinations, standardisation of the administration of the examinations is vital to the validity and reliability of the results. Furthermore, there are also important security and timing issues for the examinations. Improvement has been seen in the distribution and security of the papers. This has contributed to a reduction in the number of irregularities reported. However, there is a concern at how few irregularities appear to be reported and that this could point to a more significant problem of covering up irregularities. There is good reason to fear that irregularities are not being reported due to fear of penalisation or of the withholding of examination results.

There are timing problems in the examinations with some papers critiqued by the international benchmarking evaluators as being too long, sometimes because they have too many sources, as in the case of History, Economics or Geography papers. Put bluntly, since there is no reading time allocated, there are too many pages to read before learners can commence writing. This would certainly impact on the validity of the examination process and would be deemed unfair in other systems. Arising from the test administration, there are two main recommendations:

3.7.1 Given the concerns about irregularities, provinces and examination centres should be encouraged to accept accountability for irregularities and be required to report them. This requires both that the consequences be in proportion to the irregularity being reported and that firm action be taken in cases where irregularities are found to have occurred, but no official irregularity report has been submitted.

3.7.2 In some papers where there are extensive sources and a greater reading demand (e.g. Economics, Geography and History), a mandatory reading time should be introduced at the beginning of the examination session prior to candidates attempting to answer the papers. This would improve the validity of the process.

3.8 Scoring Test Responses

This aspect is one of the most crucial phases of the examination process. Learners' responses to the questions need to be evaluated and marked in terms of what the original purpose of the question was. Therefore clear and transparent memoranda containing correct information related to the answers are essential. The memorandum for a paper has to be agreed upon by all markers using it and markers have to be able to apply it accurately. At the same time, memoranda should not be unduly prescriptive. Creative answers are often generated by the top learners and provision needs to be made for the possibility of answers that have not been identified before marking is done. Chief Markers need some discretion in this regard. Marking has to be undertaken by qualified professionals and the quality assurance of this process and its competent management is absolutely critical to the validity and reliability of the examination process. Currently this is the weakest link in the assessment process, apart from the setting of the papers. It is one of the largest factors negatively impacting the standard and quality of the NSC and its credibility. There are substantial problems

nationally with few exceptions. In 2013, four provinces were highlighted as having problems with the standard and quality of their marking, but it is a recurrent problem, sometimes affecting other provinces. The problems and their effect on the validity of the examination results raise serious doubts in the eyes of commentators and in turn affect the public credibility of the system.

2013 was by far the worst year for marking problems and this unfortunately coincided with the highest pass rate seen in the NSC. It has been suggested that incompetent markers were probably a significant factor in the “inflated” marks in 2013. Two examples from the 2013 marking verification process⁵ highlight the issues.

In Afrikaans FAL:

Open-ended responses posed a challenge for markers who are not proficient in the language. This was evident in all the provinces.

And in four provinces

Some markers experienced problems in ... interpreting and applying the rubrics.

The immediate question arises – why are markers appointed who are not proficient in Afrikaans? Considering that this happened in all provinces, there appears to be a systemic failure in the criteria for appointing markers. It would seem obvious that, in languages, one would only appoint those proficient in the languages concerned. Yet, this same problem appeared in English FAL, where the inadequate proficiency of markers in English went to the extent of markers in three provinces “not identifying language errors in the writing”.

The criteria for appointing markers in these two languages should be reviewed to ensure that proficiency in the language is a fundamental criterion for appointment.

It is also clear that there were problems in marking the African languages (although marking was not verified in Sepedi, Tshivenda and Xitsonga HL in 2013), and in the quality of the markers. In Setswana HL, the following was noted in five provinces:

⁵ Umalusi external moderators visited a number of provinces in some subjects and verified the marking in a number of centres. The findings were summarised in a QAA Schools Sub-unit report “of key findings: 2013 marking verification (Provincial Education Departments)” which is an internal Umalusi report

Markers struggled in the marking of open ended questions. The marking of these questions resulted in inconsistencies, where correct responses were marked wrong and wrong responses marked correct.

Umalusi noted in 2013, that the rubrics in Home Language caused problems in the summary questions in the papers. The fact that some rubrics even included errors was further complicated by some markers not being competent to interpret rubrics.

It appears that there is great value in verifying the marking across all provinces and across all subjects. Umalusi should be commended for this initiative and should expand its activities further in 2014. In particular the languages appear to need a considerable and systemic intervention.

It needs to be emphasised that although Umalusi has for eight years consistently raised concerns about the quality of the markers and the low standard of the marking, there has been little change in the system. Apparent inability to address the problem of marking undermines the authority of both DBE as the examination body and Umalusi as a quality assurance body responsible for this examination.

In summary some of the problems of the marking appear to be:

- (a) Tribal or political favouritism in the appointment of markers, and in one case a quota system for district representation without regard to the quality of the markers
- (b) Treating marking opportunities as favours for friends or basic training opportunities;
- (c) Inappropriate appointment of people to positions far beyond their capability, and in some cases people promoted as senior and chief markers when they had earlier been removed from positions as markers due to their incompetence;
- (d) Failure by some provinces to attend the memo discussion, followed by their applying their own changes and not complying with standardised marking, and
- (e) Numerous indications of lack of capacity and incompetence where discrepancies were found to exceed 20 marks.

Only the Western Cape selected its markers in 2013 based upon competency tests and was possibly disadvantaged by the strictness of the marking in its final overall results.

A multifaceted, urgent and substantial intervention is called for to deal with the significant problems with the marking and the impact of this on the validity and reliability of the results.

Accordingly we recommend that:

3.8.1 Quality be the most important criterion for appointing markers. Qualifications and experience are critical to establish and maintain the validity of examinations. Markers at all levels of seniority must have the required qualifications and experience to be appointed.

3.8.2 Potential markers be required to demonstrate their competence prior to being appointed. In particular, markers for the languages must demonstrate their proficiency. Subject matter competence tests are one way of proceeding.

3.8.3 Non-education related criteria for the appointment of markers, such as tribal or political alliances, be eliminated. Markers found providing false information about their experience and qualifications must be prosecuted, and referees found to have supplied false information should be held accountable.

3.8.4 On-site training during marking be of a high quality and specific to the examination papers. It cannot be general and introductory. In this context, marking of papers should not be viewed as a basic training opportunity, although it could be regarded as enhanced professional training.

3.8.5 Markers who fail to meet the required standards for marking papers not be allowed to continue to mark. Should a marker be fired from the marking process, all papers previously marked by that marker should be remarked in full.

3.8.6 Representatives from all provinces compulsorily attend all related and appropriate memo discussions. No changes to the memos should be allowed outside of the specified policies without approval.

3.9 Passing scores

Internationally, establishing defensible passing scores is an important part of test development and is seen as an inherent part of the comparability of standards over time.

In the NSC, passing scores are not set for every subject and some of the requirements occur in combination (e.g. 40% required for Home Language) and are therefore not subject specific (can fail one subject – not specified which). Under the promotion requirements in this report (see chapter 1), the committee's recommendation is made in part to address this by specifying promotion requirements at different levels and specifying that the LOLT pass mark varies depending on the different categories of pass.

The lack of comparability across home, first additional and second additional languages is one example where there are significant problems. The move in 2012/2013 to establish a common framework for assessing the home languages was a first step. However, it was discovered during the standardisation process that some languages are not implementing this. The common framework still has to be implemented across the first additional and second additional languages⁶. Effective implementation is linked to the introduction of a common test specifications grid where the cognitive demand, format and structure of the papers across home, first additional and second additional languages should be similar without compromising the existing standards of certain languages. For instance, in the implementation of the home languages common rubric, there was a suggestion that the English and Afrikaans home language papers might be too high in their demands and should be adjusted downwards. Such a move, which ignores the purposes of the subjects and the importance of national development, should be avoided at all costs. If necessary, it should be prevented as a matter of explicit policy.

The problem of having unsatisfactory rubrics and not correcting them, sometimes for years, is particularly disturbing. Whilst an intervention has been made in the languages to address this, apparently there has been no such action in History where it was equally needed.

⁶ Bearing in mind the discussion in Chapter 3 regarding the uniqueness of the EFAL position requiring higher standards than the typical First Additional Language

It is recommended that whilst there are no passing scores in the traditional sense of test development, nonetheless the issue of comparability of standards across papers such as language at certain levels is essential and should be addressed given the current uneven cognitive demand of papers across the 11 languages. Uniform rubrics and test specifications grids are important to establish commonality in the standards required for home, first additional and second additional language papers across the languages and should therefore be implemented as soon as possible. This will partly address the need to improve the quality of the language papers.

3.10 Reporting examination results

Reporting the examination results is not confined to announcing how each candidate has fared. It involves a review of the conduct of the entire examination and the significance of the outcomes. Issues related to accuracy and quality control (such as their timeliness and meaningfulness) is important. Furthermore, it is essential to report on irregularities, challenges experienced and the supplementary examinations processes. Good reporting acknowledges validity issues and makes a major contribution to the credibility of the qualification.

This is an area in the NSC examinations process where there has been visible improvement over the past five years. The annual reports distributed publicly have improved in their contents in terms of the variety of topics and data included and serve as valuable information for the system. However, in order for the system to evaluate progress, it is essential that some of the reported information heads remain constant to allow review of trends and patterns in the data even though this may reveal inconvenient truths.

Another tradition in the reporting of NSC results that is entrenched in South African practice has severe unintended consequences. That is the printing of the successful candidates' results in the newspaper and media.⁷ The extreme embarrassment of candidates who are not successful and are so publicly revealed as failures has serious consequences, and there are cases annually of its leading to self-harm and even suicide. This practice should be reviewed, given the unintended harm that it may cause and the modern technological alternatives for communication. Whilst in the past the reporting of schools results – covering them with glory or naming and shaming

⁷ Referred to as the annual circus by commentator Prof Jonathan Jansen

their non-achievement – was also seen as an accountability measure, it, too, has unintended consequences, not least for learners from those schools which have succeeded, so alternative ways should be found to release results. It is therefore recommended that reporting lists of successful learners' names and reporting schools by performance levels in the newspapers and other media in the traditional manner be avoided in the future. This should not prevent the media from reporting on the individual "success" stories of learners or schools.

There is some concern in the quality assurance sector that there is an increase in the incidence of failure to report irregularities. There is a related concern that some provinces do not encourage reporting. These concerns should be investigated. If they found to be valid, this would be highly problematic. In general, provinces and examination centres should be encouraged to report irregularities without having to fear disproportionate consequences.

3.11 Item banking

Item banking is characteristic of many large examination systems and national assessment systems. The advantage is that the items contained in the bank/database have been tested and shown to be psychometrically sound in their qualities. They are also categorised in terms that could directly fit into a test specifications grid for test development. This also addresses many of the security issues related to examinations and has been found internationally to be a useful and flexible resource for examination panels compiling the examination papers.

The NSC does not currently make use of item banks, so each year examination panels generate new sets of items to include in the examination papers. In these circumstances, the examination panel members and the external moderators have to use their professional judgement, based on qualifications and educational experience, to assess these untried items. There is no second chance to get the paper right. The NSC therefore depends entirely on informed subjective judgement for standard setting of papers. It does not have the benefit of empirical data based on items having been tried out previously.

The Committee recommends that the Department consider establishing an item bank, initially compiling items for one or two subjects to explore its effectiveness and potential impact in the South African NSC context.

3.12 Examination Technical Report

Every good examination system produces an examination technical report which contains systematic, thorough, detailed documentation of validity evidence as well as a number of recommendations.

As mentioned earlier in this report, the reporting on the NSC examinations has improved significantly over the past 4 years. This is to be commended. The different reports, technical, subject and diagnostic, are informative and provide valuable feedback to the system. One aspect that limits the depth of reporting and therefore understanding of the results is that capturing of data remains at the topic level and with the exception of one province does not capture the results per learner at item level. This prevents the system from using Rasch or Item Response theory to understand the quality of the items as opposed to the ability of the learners, or to undertake any equating of the results across years. This limits the ability of the system to interrogate the quality of the examination data over time.

While other quality issues are being addressed, the Committee recommends that the possibility of capturing the data from the examination papers on an item level be investigated. Although this would require resources, it would provide an effective means of exploring quality and would allow the use of appropriate scientific methods to gain a better understanding of the source of problems.

3.13 External Quality Assurance Processes

Two processes not listed in the previous section are used by several countries including South Africa: the international benchmarking process and the standardisation of the results. These are discussed briefly here.

3.13.1 International Benchmarking of the NSC Qualification with International Qualifications

During 2008, Umalusi conducted research which compared the NSC curriculum and examinations (exemplars and the first 2008 papers) to those of the SC, both Higher and Standard Grades. The primary purpose of this research was to achieve continuity of standard between the old and new qualifications. For this process, an evaluation instrument, based on previous Umalusi research (2006–2008), was developed to address key areas in curriculum and examination analysis.

In 2008, HESA approached Umalusi to assist it in an equivalence-setting exercise for the NSC, as it needed "to establish whether a foreign qualification could be recognised as fully or partially comparable to the NSC, and the minimum requirements for admission to degree, diploma and higher certificate [study] in South Africa" (HESA, 2008:1).

As a result, in 2009, in collaboration with HESA, Umalusi initiated an NSC-based "equivalence-setting" research project. The project sought to compare this new qualification, its curricula and examinations against the equivalent-level curricula and examinations of the various Cambridge International Examinations (CIE) and those for the International Baccalaureate (IB). The Namibian National Senior Secondary Certificate (NSCC) qualification was considered an example of the Cambridge qualification within the southern African environment and therefore included in the project

The purpose of the project was also to enable HESA to determine appropriate minimum admission requirements for higher educational institutions. Therefore the Umalusi evaluation teams were requested to consider whether the international qualifications could be mapped in relation to the NSC.

The following conclusions arose from the findings:

- (a) The CIE AS-Level⁸ and IB SL courses can be considered comparable to the NSC. Consequently, it was concluded that in terms of admission to South African higher education institutions, both in terms of the depth of content in the curricula

⁸ This finding is by the CIE evaluations of 2008, 2010 and 2012 curricula and examinations in section regarding benchmarking of examination papers.

and in terms of the cognitive demand of the examinations, the CIE AS Level and the IB SL could be viewed as leading to the attainment of an educational level that is similar to that of the NSC.

- (b) Overall, the IB HL and full A-Level courses are the most demanding, if examination difficulty and depth of curriculum content are points of reference. As a result, the educational level attained is higher than that of the NSC. Consequently, while both these qualifications are acceptable for higher education admissions, when comparable admission points tables are determined, higher points will have to be awarded for achievement in A Level and IB HL courses than for NSC subjects.
- (c) The IGCSE should not be considered at all comparable to the NSC. As it is a lower level qualification, it would not be appropriate to set the same education entrance criteria for the IGCSE as for the NSC.
- (d) There were some differences in the above overall trends with respect to specific subjects.

As will be seen in later sections, some of these conclusions have been challenged by the reports related to the benchmarking of some of the large enrolment subjects by the international assessment bodies.

3.13.2 Early Activities Related to International Benchmarking of Examination Papers by Umalusi

Umalusi has undertaken several projects and written a number of reports related to the standard and quality of the SC and NSC as well the examinations (Umalusi, 2007; Umalusi and HESA, 2010).

A research project, carried out in 2004, examined the standard of Senior Certificate examinations over a ten year period (Umalusi 2004). The research was designed when there was public outcry against what was perceived to be a lowering of standards – based partly on a very high pass rate in 2003, and criticisms made by higher education institutions about the quality of learners entering their institutions (Umalusi, 2007). The 2004 Matric Research was therefore to compare examinations from 1993, when education was still divided into eighteen different departments; 1999,

when pass rates were low; and 2003, when pass rates were at their highest. Subjects examined were English First Language, English Second Language, Biology, History, Mathematics and Physical Science. In other words, the researchers were looking at six different subjects within the same qualification, over a period of time.

In 2006, Umalusi undertook a comparison of syllabuses and examinations in the same part of the education system (senior secondary school) across four African countries. The subjects selected were English, Mathematics, Science, and Biology in Ghana, Kenya, South Africa, and Zambia. Syllabuses and the 2004 examinations from each country were examined.

However, these efforts at benchmarking all predated the NSC. It was the later international benchmarking activities conducted by bodies in England, Scotland and Australia that focused on the NSC and are therefore discussed in the following section.

3.13.3 International Benchmarking organised by Department of Basic Education

The first activities related to obtaining an external evaluation were undertaken by the Department of Education (now DBE) in 2002 when a few papers were sent for evaluation by international bodies. Unfortunately, no information about this is available as the staff member responsible for this external evaluation left and the Department had no records to provide the committee.

Thereafter, benchmarking related to the NSC was undertaken by the department on exemplar papers for 2008, and examination papers from 2010 and 2012. The processes and findings are briefly described below.

3.13.4 NSC Exemplary Papers Benchmarking 2008

It was only in 2009 that a limited international evaluation of a few papers was completed, a process that began as part of the preparation for the curriculum change in 2008. In 2007, a national milestone had been reached with the implementation of the first nationally set examinations – it was the first time all candidates were exposed to a common standard in all subjects. In 2008 the NSC was implemented and candidates wrote common examinations based upon the new curriculum. An international evaluation of exemplar question papers was undertaken by Cambridge International Examinations (CIE), the Scottish Qualification Authority (SQA), and the

Board of Studies, New South Wales (NSW). However, the results were not revealed publicly or to the quality assurance agency, Umalusi. This initiative was noteworthy indicating the need for assistance in making the transition from the SC to the NSC.

The DBE had the challenge of reducing two levels (Higher Grade and Standard Grade) into a single examination to be administered to the entire NSC Grade 12 enrolled for the examinations. It was inevitable that the examiners did not find this task easy or get it completely right in the first year 2008. This had significant implications, not only for the department, teachers and learners, but also for the standardisation process at Umalusi. The external evaluation of exemplar papers and the many critical comments and some affirmation constituted an important step in developing the examination process.

3.13.5 Benchmarking 2010

In 2011, CIE, SQA and NSW again undertook evaluations, this time of 15 examination question papers from 2010. While this was a noteworthy and important activity, the evaluation reports were once again not made public or shared with Umalusi. They proved in the main to be highly critical, but made it clear that it is a very difficult exercise to compare curricula and qualifications across systems. A number of comments across all three examination bodies revealed that on the whole the mathematics papers had the fewest problems and were rather robust. The consensus appeared to be that the NSC was not on the same level as the other exit qualifications and was more on a par with the UK AS levels. There were considerable problems with the Life Sciences papers and with the level of the History, Geography and language papers evaluated. Among the technical issues highlighted were:

- (a) The level of questioning was too low in most papers, with too much emphasis on recall and low level questions.
- (b) There was a need to raise the cognitive levels to include more critical thinking skills.
- (c) The texts accompanying the language and history papers were not deep enough to generate questions of sufficient quality to sustain critical thinking. Furthermore, where there were essay type questions, the word count stipulated was too limited to permit learners to explore the length and depth needed to demonstrate higher order thinking.

This much by way of background; in exploring benchmarking, the Committee focused on the 2012 benchmarking reports, only referring to 2010 when a pattern emerged.

3.13.6 Benchmarking 2012

The 2012 examination papers for what are regarded as the gateway subjects with large enrolments were sent for review in 2013. As yet the reports received by the DBE and reported on here have not been signed off by the Minister. The same international organisations were used as for the earlier evaluations, but Higher Education South Africa (HESA), as a major interested party, was also included.

In summary, findings in the evaluation of the 2012 papers were similar to those for 2010. However, it is important to note that the external evaluators observed significant improvement in the quality of the papers.

3.13.6.1 Benchmarking by HESA 2012

HESA's process involved a total of 14 subject specialists being nominated, with each subject having 2 subject specialists, selected on experience, expertise and availability. Each subject specialist had to have had more than 5 years teaching experience in his/her subject field. The subject specialists nominated were from 11 of the 23 public universities in South Africa.

The subject evaluators were given: a) National Curriculum Statements (NCS), b) Subject Assessment Guidelines (SAG), c) Learning Programme Guidelines (LPG), d) Question papers, e) Marking guidelines, and f) the Evaluation framework for national and international benchmarking of NSC.

The process appears to have put the evaluators under some time pressure as HESA reported "that the subject specialists were given only a month to fit in the requisite number of hours for the evaluation. The evaluation was conducted during September 2013 and the challenge was to get the reports from the subject specialists in time to prepare the comprehensive report for DBE" (HESA 2013, 3).

The findings are summarised below:

Accounting

In terms of content and structure, the paper generally complied with the Accounting SAG and the examination guidelines. However, it did not meet the target regarding cognitive demand and level of challenge as set out in the NCS and the SAG. There was a tendency to use lower order questions that required recall rather than high order questions that called for application. The paper had questions that provided opportunity for candidates to be innovative and thus for learners with different cognitive abilities to be differentiated. It also had some problem-solving questions of sufficient depth. However, a detailed analysis of the paper revealed that 34% of the paper was not challenging. Given that the NSC promotion mark is 30%, weaker learners could obtain a significant number of marks, which could allow them to pass without being tested at an appropriate level.

English First Additional Language

In general the papers were of good quality given the constraints of weighting that examiners needed to take into consideration when drafting them. However, there were serious flaws. A better balance between evaluation and analysis of the actual use and production of language was required. The question papers, especially paper 1, focused mainly on whether the learners were able to interpret language rather than on their effective use of the language to achieve a specific goal. The papers generally adhered to policy prescripts and guidelines, exposing learners to a range of texts, questions and tasks. However, careful consideration should be given to the choice of texts in future, as some texts had an urban bias to the disadvantage of learners from rural areas. Other critical concerns were that the question papers: a) had too many questions with low cognitive demand, i.e. knowledge recall questions; and b) ignored language for social purposes. The question papers were generally aligned to the NCS in terms of structure, assessment tasks and content. However, at the theory level they displayed low standards and poor quality.

Geography

In general the question papers were of acceptable standard and largely complied with the relevant policy guidelines. However, the questions asked in both papers were at the lower level of the assessment standards. They did not provide an opportunity for candidates to demonstrate their depth of geographical understanding. In other words,

the question papers did not challenge learners to apply a range of cognitive skills and to describe, explain, analyse, evaluate, synthesise, etc. These cognitive skills are associated with high order questions, so the papers deprived learners of the opportunity to demonstrate high order skills. The papers used mostly closed type questions which did not require a lot of thought or extended responses. Consequently, thinking and communication skills were not addressed in ways that the NCS and SAG policy guidelines require.

History

Both papers met the relevant policy prescripts in terms of structure and philosophy, and the content was in line with the NCS and the SAG. However, the question papers did not allow for deep cognitive exploration of the subject. The use of more low order questions deprived learners of challenging high order questions. An important question is: how do these papers challenge the strong candidates and how do these papers differentiate learners for university studies in terms of the cognitive levels employed?

Life Sciences

The 2012 Life Sciences question papers fell short of the requirements of the NCS and the assessment guidelines in the following ways:

- (i) The mini essay in section 3 of both papers did not comply with the NCS in terms of content validity;
- (ii) There was an imbalance in assessment of learning outcomes. LO 2 was over-assessed in comparison with the other LOs, and
- (iii) The questions were mostly of low cognitive level at the expense of high cognitive demand questions which test abilities essential for higher education. The papers used clear and easy to understand language with no detectable bias.

Mathematics

The question paper met the policy guidelines. However, the questions were of low cognitive level and were not adequately challenging in terms of requisite cognitive skills. Some topics such as indices and logarithms that are important for university studies were not covered. The question papers allocated too many marks to

trigonometry problems and too few to transformation problems. This was problematic because the latter test abilities vital for university studies. A further problem was that the question papers did not use the recent taxonomy and this had a negative impact on the kind of questions asked. The fact that paper 3 is optional implied that learners' opportunity to demonstrate their development of logical thinking was compromised if they did not write it.

Physical Science

The 2012 NSC physical science papers were fair and balanced and met the NCS and the SAG. The papers used language appropriately, without bias, in ways accessible to Grade 12 learners. However, they overemphasised Learning Outcome 2. The examiners should guard against a predominance of recall questions. Furthermore, it is of critical importance that the questions be set in a South African context to accommodate learners outside urban settings who might lack some social capital.

In conclusion, HESA reported (p.7) that:

The emerging trend from the subject reports was that the questions papers had a lot of low cognitive level questions which inevitably failed to differentiate learners and so allowed weaker learners to pass while failing to challenge strong learners. Weaker and stronger learners could pass without putting in much effort, especially as the NSC promotion requirement is set at 30%.

HESA further concluded that the question papers “were aligned to the structure of NCS in terms of the structure, assessment tasks and content”. However, they felt that the “question papers displayed low standards and poor quality at the theory level”.

The report noted that some of the concerns would be addressed by the introduction of Curriculum Assessment Policy Statements (CAPS) in grade 12 with effect from 2014. It also alluded to the NSC promotion requirements being addressed by the Ministerial Task team.

Among HESA's key recommendations, given the diverse purposes of the NSC, was a need to introduce additional examination papers in some designated subjects, earmarked for learners who wish to pursue studies at university level.

3.13.6.2 Benchmarking by International Bodies 2012

The three international bodies involved earlier (CIE, SQA and NSW) were asked to evaluate the National Curriculum Statement, Learning Programme Guidelines, Subject Assessment Guidelines and Memoranda (marking guidance) and examination papers developed and implemented in 2012. The following examination papers were evaluated

- (a) Accounting (Paper 1)
- (b) English 1st Additional Language (Paper 1, Paper 2 and Paper 3)
- (c) Geography (Paper 1 and Paper 2)
- (d) History (Paper 1 and Paper 2)
- (e) Life Sciences (Biology) (Paper 1 and Paper 2)\
- (f) Mathematics (Paper 1, Paper 2 and Paper 3)
- (g) Physical Sciences (Physics) (Paper 1)
- (h) Physical Sciences (Chemistry) (Paper 2)

The evaluators were asked to compare the standard of the papers to their respective exit qualifications at the same level. For Cambridge this was the Advanced Subsidiary (AS) Level and not the Advanced Level (A levels). For the SQA, this was the Scottish Higher levels and for NSW it was the Grade 12 New South Wales Higher Senior Certificate (HSC).

There were five broad criteria for evaluation:

- (i) Adherence to the National Curriculum and Assessment Policies
- (ii) Content coverage
- (iii) Cognitive skills
- (iv) Language and bias
- (v) Validity.

In summary, the three bodies concluded the following:

3.13.6.2.1 That the NSC was not yet at the level of the international equivalent qualifications being compared (i.e. was not yet comparable with the UK AS levels, Scottish Highers and NSW HSC). The CIE reported that there was a general consensus that the NSC is almost there, but the one main failing is

still the limited assessment of higher level thinking skills and more creative approaches.

These skills are highly prized by higher education institutions and by employers. If they could produce evidence that students can think independently and apply their knowledge to solving problems, the NSC examination papers could gain much greater respect and credibility, possibly leading to a stronger impact on teaching at Grades 10–12.

This is the lead theme from all three external benchmarking bodies and HESA: the limited assessment of higher order abilities compromises the credibility of the qualification. It is one of the reasons stated by all three bodies for the NSC not being comparable to their qualifications of equivalent level and purpose.

3.13.6.2.2 English First Additional Language was not comparable in standard to anything offered by the three examination bodies. All felt that the standard was low for this Grade level. CIE stated that “the one syllabus that seems to fall well below the Cambridge AS level standard is English First Additional Language”.

3.13.6.2.3 The 2012 examination papers appeared better than the 2010 papers. However, comments made in 2010 were still pertinent in 2012.

3.13.6.2.4 A preponderance of questions testing low level thinking skills, as was reported concerning the 2010 papers, continued to need attention, although in some 2012 papers there was an improvement in this area.

Generally, there was excessive reliance on the assessment of memorisation and recall of knowledge, with a lack of assessment of higher level thinking skills that involve analysis, evaluation and critical thinking (NSW).

3.13.6.2.5 The duration of the examination papers is long. This was mentioned by both CIE and NSW. CIE raised the question

whether it was necessary to cover the content of almost the entire syllabus in the examinations, which makes them extremely long in terms of numbers of questions and sub-questions, and especially in the amount of time for examining.

Figure 7.8 below from the NSW report illustrates the point by comparing the papers from the NSC with those from NSW. What is clearly evident is that the NSC tests are long in duration and high in terms of mark allocation. CIE and NSW raised the question of curriculum coverage and the possible effect of learner fatigue on performance. CIE asked whether

candidates' knowledge and skills could not be assessed just as effectively, but more efficiently, by selecting different topics to be tested each examination session with fewer questions in a shorter time? Candidate fatigue can also become a negative factor in performance.

NSW noted the possibility of streamlining the NSC examinations:

As shown in the table below, the South African examinations tend to be longer, contain multiple papers and have a total mark value far greater than those of their NSW HSC counterparts. This enables the South African examinations to have a more comprehensive coverage of content than the equivalent NSW examinations. NSW HSC examinations are written using the principles for setting HSC examinations in a standards-referenced framework which emphasizes representative sampling of content and outcomes assessed in any one year and across a number of years. In several examinations, evaluators noted that several questions were on similar areas of the syllabus. They also noted that the larger total number of marks available resulted in some questions being more heavily weighted than appropriate, and often simpler recall or more repetitive tasks carried more marks than questions that may have required less work but more insight or skill.

	South Africa – NSC		NSW – HSC	
English FAL	3 papers: 6.5 hours	250 marks	3 papers: 3 hours	100 marks
Geography	2 papers: 4.5 hours	400 marks	1 paper: 3 hours	100 marks
History	2 papers: 6 hours	00 marks	1 paper: 3 hours	100 marks
Mathematics	3 papers: 8 hours	400 marks	1 paper: 3 hours	100 marks
Mathematical Literacy	2 papers: 6 hours	300 marks	1 paper: 2.5 hours	100 marks
Life Sciences	2 papers: 5 hours	300 marks	1 paper: 3 hours	100 marks
Physical Sciences – Chemistry	1 paper: 3 hours	150 marks	1 paper: 3 hours	100 marks
Physical Sciences – Physics	1 paper: 3 hours	150 marks	1 paper: 3 hours	100 marks

Figure 7.8: Comparison of South Africa’s NSC with New South Wales HSC papers (Source: NSW 2013, 4)

3.13.6.2.6 There is a need to differentiate between ability and performance. Just as HESA raised the point about differentiating between levels of performance and the need for more challenge for those potentially going to university, the CIE asked

whether there is scope for the full range of student abilities in all the examination papers that can clearly [distinguish] between different levels of ability and performance, so that the top scores clearly signal to a future employer or higher education admissions officer that the candidate has exceptional skills. That would possibly require a deeper level of challenge.

3.13.6.2.7 Mark allocation is not always appropriate. All three bodies referred to the problem of the allocation of the marks. Having a test specifications grid could assist the internal moderators and external moderators to review the balance of the marks and allocation per topic. The CIE remarked that the allocation of marks

was questioned by several reviewers who felt that candidates could gain many marks on simple questions of knowledge (memorisation and recall), while the more taxing questions or tasks using deeper skills and requiring more time, seemed not to have a comparatively adequate reward. This risks having a negative backwash on

teaching, if teachers become aware that adequate results could be attained by merely memorising content.

The SQA comments on the History papers highlighted the issue of mark allocation:

It would appear that there is too strong a focus on low value questions which simply test ability to read a source and extract the evidence or to define words. As such, an imbalance exists and there does not seem to be equivalence between this question type and those question types requiring a more analytical response.

NSW said much the same:

[T]here are more questions with low mark values (most commonly 2 mark questions) than in comparable NSW HSC examinations (other than mathematics examinations). In addition, questions with higher mark values (such as 8 marks) are often broken up into multiples of 2 marks (that is, 8 marks = 4 × 2 marks). This suggests a lack of shared understanding of the nature of response required. Evaluators noted instances where quality questions were asked but mark value and/or recommended length of response limited the opportunity to reward good responses appropriately.

The consequence of these mark allocations would be to inflate the performance levels of the lowest performing learners.

3.13.6.2.8 Better quality control of the papers is needed. All three bodies referred to this. The CIE reported

the need for more thorough checking, editing, reviewing and vetting of papers. In Accounting and Physical Sciences, the reviewers noted inaccuracies in the questions and texts, possibly due to their wording, which could lead to confusion and distress on the part of the candidates. In History, it was noted that the options offered to candidates were of differing levels of difficulty, making it easier for some candidates to gain more marks than others. These are all issues that could be picked up and corrected with careful review processes taking place.

However, NSW notes more generally that:

The questions are grammatically correct, free of punctuation and spelling errors, and are well edited. Consequently they would have been readily accessible to their target audience of 17/18 year old students.

3.13.6.2.9 Life Sciences papers continue to be problematic. Problems related to the Subject Assessment Guidelines were raised in 2010 and appear again in 2012. Furthermore, the Assessment Standards were not achieved and the balance of the Learning Outcomes was not adhered to and therefore the categorisation of some of the questions was incorrect. Additional critique included that from SQA:

- (a) Most questions are of the closed type.
- (b) Where candidates present data as graphs or charts, the level of demand is low and there is little evidence of questions which demand comparison of data.
- (c) There is little evidence of modern approaches and there are few questions set in experimental situations.
- (d) Data have been wrongly attributed to James Watson and Francis Crick.
- (e) There is variable clarity of language and little evidence of the development of scientific literacy.
- (f) Passages are short and not demanding enough for Grade 12. Questions appear to test prior knowledge rather than comprehension and other skills.

In 2010, the reviews were similarly critical. It is imperative that the DBE follow up on the critical comments by the reviewers so that the system can benefit from the international benchmarking exercise.

3.13.6.3 Way Forward

We have given a synopsis of the general comments common to all three bodies. It must be of concern that problems highlighted in 2010 frequently recur in 2012, suggesting that the 2010 comments were not (adequately) engaged with. In addition to the comments common to the external reviewers, there are other useful comments

that should be reviewed. There needs to be an in-depth review of the reports from 2012 and 2010 with the internal and external moderators, leading to changes in subjects where there are recurrent problems.

In the subject specific reports on the individual papers, there are several content specific comments that would be very useful for the examiners and moderators to take into consideration while setting and reviewing papers for 2014 and beyond. It is clear that the use of test specifications grids is needed to address issues of mark allocation and comparability. However, a more significant discussion is required about the length and duration of the examination papers themselves and the tendency to try and assess the breadth of the curriculum.

3.14. Standardisation of the results

Umalusi as the Quality Council responsible for standards and quality in general in the Further Education and Training phase is the authority accountable for assuring the quality of these qualifications.

The National Senior Certificate is a high stakes qualification in South Africa. The overall performance of learners in the NSC is also viewed as an indicator of the “standard” of education in South Africa. Umalusi implements a system of quality assurance processes annually to assure the standard, quality and credibility of the NSC qualification.

In terms of the GENFETQA Act of 2001 (as amended in 2008), Umalusi is required to approve the release of results once it is satisfied that the examinations have been conducted in a credible manner. In order to make this determination, Umalusi undertakes the following quality assurance processes:

- (a) Moderation and approval of question papers;
- (b) Verification of the moderation of internal assessments;
- (c) Monitoring of the conduct of examinations;
- (d) Monitoring of the marking process;
- (e) Verification of marking;
- (f) Standardisation of the results.

In standardising the raw mark of learner performance for each subject Umalusi is concerned with “safeguarding the value, integrity and credibility of the NSC” while also

ensuring that learner performance is not affected by any external factors outside of their control, and that standards are maintained from year to year.

Standardisation of results is undertaken annually in many countries to take care of the variation in the standard of the question papers and variation in the standard of marking that could happen from one year to another. The process is based on the principle that when the standards of an examination are equivalent there are certain statistical mark distributions which should be similar (except for by chance statistical deviations). The moderation of the results involves comparing mark distributions of the current examination and the corresponding average distributions over a number of years to ascertain the extent to which they correspond. If there is a high correspondence, then it is accepted that the examinations were of equivalent standard. If not, attempts are then made to ascertain from other sources of information (known commonly in South Africa as the qualitative input) the possible reasons for the differences and then an intervention is made to adjust the marks. Reasons for differences may include: cohort differences, changes in curriculum, changes in setters of the examination papers, disruptions in the schooling processes and security leakages. In the absence of evidence of such possible reasons, it is then generally accepted that the differences are due to deviations in the standards of the examination or marking and therefore marks are adjusted to compensate for the deviations (Umalusi 2007a, 29).

A review of the 2011 results (see Figure 7.9) reveals the effect that the standardisation process has on the overall results for individual subjects. Only a few subjects are listed as examples. As can be seen from the table, the pass rates based on the raw scores of five subjects out of 11 subjects (excluding the group of African languages) were affected due to modifications during the standardisation process. The changes in the pass rates varied from about -11% to +12%, meaning that either 11% fewer learners passed or 12% more learners passed after the changes were made.

However, it is after the standardisation process when the final calculations are made that the true impact of the School Based Assessment and the language compensation process can be seen. In terms of the policy on language compensation, learners who offer an African language as Home Language and do not offer Afrikaans or English as Home language qualify for a 5% language compensation on the mark they have obtained in a non-language subject. This compensation will not be applied as from the 2014 examinations. After its independent standardisation process at Umalusi, the SBA

mark is weighted 25% of the overall final mark for a learner, with the examinations contributing 75% to the overall final mark.

In 2011, the standardisation process made adjustments to the raw marks that in turn affected the pass rate by between -9% (Business Studies) and +13% (Economics). After standardisation, the final processes (of adding the SBA and language compensation) resulted in between an additional +3.5% (Afrikaans HL) up to about +9% (Geography and Economics) of learners passing. It would appear that the SBA and language compensation significantly impact on the pass rates of learners.

SUBJECT	Raw Pass Rate%	Pass Rate after Standardisation	Final Pass Rate after SBA and Language Compensation	No. of candidates in 20–29% raw scores	% of candidates in 20–29% raw scores	Total No. of candidates
Mathematics	40.78	40.78	46.3	45375	20.18	224874
Physical Sciences	46.59	46.59	53.4	43726	24.19	180746
Economics	42.7	55.08	64.0	45346	33.97	133493
Accounting	48.9	53.27	61.6	41133	29.78	138109
Geography	60.74	60.74	70.0	52698	26.45	199271
Life Sciences	56.5	66.82	73.2	79163	29.86	265157
Business Studies	82.2	71.77	78.6	24452	13.03	187657
English FAL	95.53	93.91	96.2	17954	4.34	413983
Mathematical Literacy	80.3	80.3	85.9	39371	14.31	275209
English HL	91.47	91.47	95.0	6600	7.73	85403
Afrikaans HL	94.60	94.60	98.1	1600	3.34	47961
African HL	>99	>99	>99	small compared to total enrolment		

Figure 7.9 Examinations results versus final results 2011

In Figure 7.10 the effect is summarised in the last column (total difference in percentage between the pass rates after standardisation, SBA and Language compensation and pass rates based upon the raw results). It reveals large variations

across subjects. In 2011, the pass rates for Economics, Accounting and Geography were most significantly affected and more than 8% more learners passed with the contribution of SBA and language compensation. Economics, Life Sciences and Business Studies pass rates were most affected by the standardisation process where issues related to the papers resulted in adjustments having to be made.

SUBJECT	Total No. of candidates	Difference in pass rate between raw and standardisation	Difference in pass rate between final and standardisation	Total difference in pass rate between the final mark and the raw mark
Mathematics	224874	0.00	5.52	5.52
Physical Sciences	180746	0.00	6.81	6.81
Economics	133493	12.38	8.92	21.3
Accounting	138109	4.37	8.33	12.7
Geography	199271	0.00	9.26	9.26
Life Sciences	265157	10.32	6.38	16.7
Business Studies	187657	-10.43	6.83	-3.6
English FAL	413983	-1.62	2.29	0.67
Mathematical Lit.	275209	0.00	5.6	5.6
English HL	85403	0.00	3.53	3.53
Afrikaans HL	47961	0.00	3.5	3.5

Figure 7.10: The effect of SBA and language compensation on the pass rate in 2011

A closer look at this phenomenon over the past 4 years for a number of subjects is afforded by Figures 7.11 and 7.12

Subject	2010 Pass rates					2011 Pass rates					2012 Pass rates					2013 Pass rates				
	Raw	Adj	SBA	SBA & Lang	Dif	Raw	Adj	SBA	SBA & Lang	Dif	Raw	Adj	SBA	SBA & Lang	Dif	Raw	Adj	SBA	SBA & Lang	Dif
Accounting	36.1	57	60.3	63.3	6.3	49.9	54.4	59.2	62.5	8.1	65.1	58	62.8	65.3	7.3	57.2	57.2	62.1	64.9	7.7
Business Studies	65.2	65.2	68.9	71.5	6.3	82.9	72.7	77.3	78.9	6.2	70.6	70.6	74.9	76.5	5.9	79.1	74.7	79.4	81.1	6.4
Economics	67.7	67.7	73.2	75.7	8	43.8	56.4	61.1	64.5	8.1	64.1	64.1	69.6	71.9	7.8	64.5	64.5	69.9	72.5	8
Geography	53.6	61.3	66.8	69.6	8.3	62.4	62.4	67.9	70.6	8.2	72.1	66.6	72.4	75	8.4	81.5	71.3	77	79.1	7.8
History	71.2	71.2	74.9	76.8	5.6	76.4	70.1	75.2	77.2	7.1	80.7	80.7	85.2	86.2	5.5	82	82	86.2	87.1	5.1
Life Sciences	65.3	68.5	73.6	75.5	7	57.6	65.9	71.8	74.4	8.5	60	61.9	67.4	69.9	8	70.7	65.6	61.5	63.7	-1.9
Math Literacy	71.5	71.5	74.8	76.3	4.8	81.1	81.1	84.6	86.1	5	80.9	80.9	84.4	86.9	6	80.7	80.7	84.1	86.4	5.7
Mathematics	31.3	44	55.5	57.7	13.7	41.5	41.5	44.3	46.6	5.1	48.4	48.4	52.3	53.5	5.1	56.6	53	56.2	58.1	5.1
Physical Sciences	41.8	41.8	46.4	49.2	7.4	47.4	46.4	51.7	54.5	8.1	61.6	53.1	57.2	60.8	7.7	59	59	63.8	66.3	7.3

Notes:

Adj: Adjusted – i.e. pass rates based on results after standardisation, **SBA:** Pass rates based on results after School Based Assessment is added, **SBA & Lang:** Pass rates based on results after Language compensation is added to adjusted marks from SBA, **Dif:** Difference between Final pass rates (after standardisation (adjusted), SBA and language compensation) and Pass rates after standardisation (adjusted).

Figure 7.11: The effect of SBA and language compensation

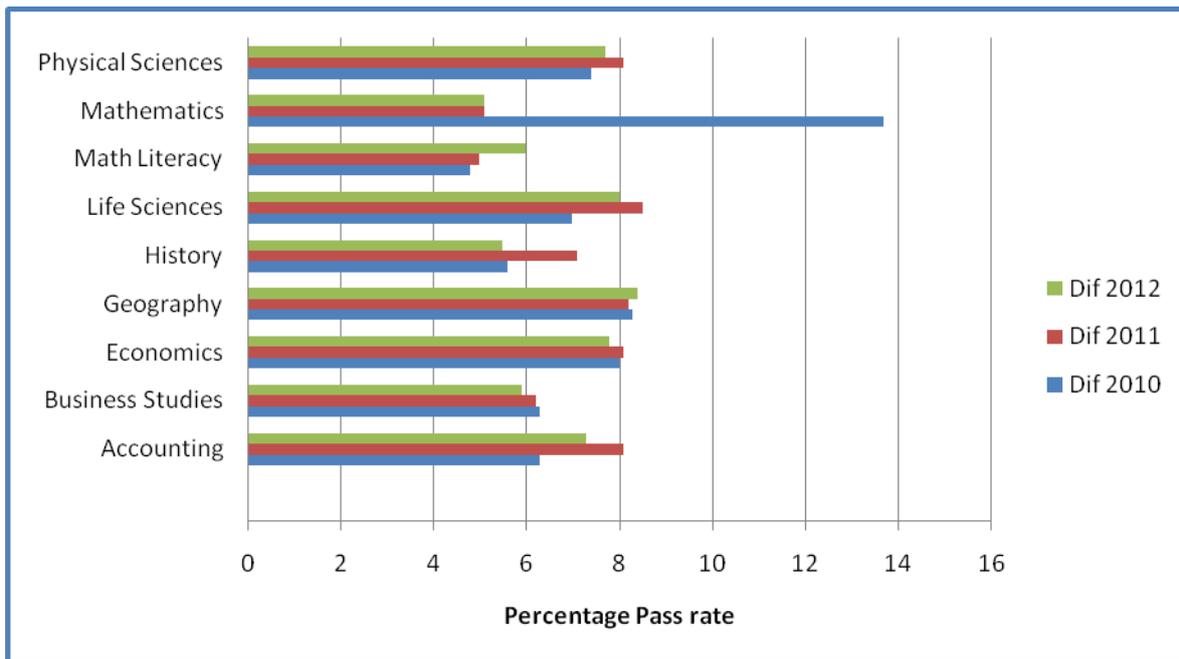


Figure 7.12: The difference in pass rates after SBA and language compensation and pass rates after standardisation

The average effect of SBA and language compensation between 2010 and 2013 was to increase the pass rates for the subjects reflected in Figure 7.12 by approximately 7%⁹ However, in 2010, the difference was 7.48% and this difference declined to 5.7% in 2012 and each year shows a slight decrease. If both SBA and Language compensation were removed from the NSC calculations, approximately 7% fewer would pass based on these estimates. The subjects whose pass rates are benefitting the most are the Physical Sciences, Life Sciences, Geography, Economics and Accounting, although in 2010, the Mathematics pass rate increased by more than 13% after the SBA and Language compensation were added.

The effect of SBA alone on the pass rates can be seen as the difference between the adjusted mark and SBA column. The contribution of the SBA to the pass rates has been declining since 2010 (from 5.1% in 2010 to 3.5% in 2013). The planned removal of the language compensation as from 2014 can be expected to result in an approximately 2–3% difference in the pass rates for the subjects reflected in Figure 7.11 based upon the results from 2010–2013. Should the SBA continue in its current form, the impact on the pass rates may be expected to be 3–4% on average, again based upon the 2010–2013 data reflected above. The interventions conducted by the DBE to monitor the SBA implementation in schools and Umalusi’s activities in the monitoring, moderation and mediation of the SBA are essential to improving the

⁹ In 2010 7.48; 2011 7.15 ; 2012 6.8, 2013 5.7 an average of 6.8 over 4 years

validity and reliability of the SBA marks and to helping restore the credibility of the SBA for the public.

What is important to note is that at the time of standardisation, the Assessment and Standards Committee responsible for making proposals for the adjustments do not have access to the consequences on the pass rates of their decisions, merely to the information about the pass rates on the raw scores. In this way, the integrity of the standardisation process is protected and the decisions made during that process are based upon evidence of the quantitative data over the past 5 years and the qualitative input only.

Due to public scepticism and increasing problems with the credibility of the NSC results, since 2011 it has been necessary for Umalusi to release the results of the standardisation process alongside its approval process. Whilst this has gone some way to demystifying the standardisation process, the sceptics continue to speak of “fiddling with the results”.

However, standardisation of results is an international practice which maintains the validity and reliability of the examination results and the integrity of a qualification. It is recognised as being a normal part of the quality assurance processes of high stakes national examinations. Therefore the committee recognises its place in the examination process and recommends that it be retained as currently practised. It is anticipated that with the first cohort writing the CAPS examinations in 2014, that the standardisation will be an essential buffer against the anticipated impact, for example of the integration of paper 3 in Mathematics into the overall mathematics marks.

3.15. Overall recommendations for the technical processes of the NSC

On the basis of the information provided in this chapter, we make the following strong recommendations:

3.15.1 Examination-related processes

We recommend that:

3.15.1.1 An overall examination plan be available providing for an 18 month cycle in the examinations process.

3.15.1.2 Content definition be given serious attention, and more specifically that all guidelines regarding curriculum content be clarified with internal and external moderators. Secondly, that where content-related problems are identified, the rubrics that are used be reviewed and adapted appropriately

3.15.1.3 Every examination paper has an **examination specification framework** and that this be sent to the external moderators and external evaluators when the paper is submitted to them.

3.15.1.4 Item development for examination papers

We recommend that:

- (a) The time scales for the development of the items and papers be revisited to establish a more realistic timeframe, and that the development process be aided by the use of a test specifications framework/grid.
- (b) Stricter implementation of the quality criteria for being a moderator be enforced, and that intensive training and up to date techniques related to item development and test construction be shared with both internal and external moderators.
- (c) Benchmark reports that clearly highlight serious flaws in the papers be shared with the internal and external moderators and be seen as part of the professional development and quality enhancement processes.
- (d) The number of items that have low mark allocations be reduced and the number of items requiring higher cognitive thinking be increased.

3.15.2 Test Design and Assembly

We recommend that:

More attention be given to the overall design of each paper, including the use of a test specification grid. Many of the comments from the benchmarking reports remark on the overall design issues related to the examination papers. Furthermore, consideration should be given to the pre-testing of items as well as to a move to item

banking to improve the quality of the items and the papers overall. This would avoid the situation where clearly unsuitable items are discovered during and after the examinations.

3.15.3 Test production

We recommend that:

3.15.3.1 There be a significant improvement in the Afrikaans translations of all the papers. The translations of the papers must be done by professionals with appropriate proficiency in Afrikaans and knowledge of the subject concerned.

3.15.3.2 While there is acknowledgement of the better security in the production phase, an intervention is required to improve the quality assurance of the printed papers, as poor quality presentation threatens the validity of the examinations. Action is needed in provinces where this is an annual problem, and accountability is not being taken for the quality control process. In some cases more resources and better capacity are needed to check the quality of printed papers prior to distribution.

3.15.4 Test Administration

We recommend that:

3.15.4.1 Given the concerns about irregularities, examination centres be encouraged to report irregularities (See 15.7.2 below).

3.15.4.2 In some papers where there are extensive additional sources and a greater reading demand (e.g. Economics, Geography and History), a mandatory reading period should be given to candidates before they attempt to answer the papers. This would improve the validity of the process.

3.15.5 Scoring Test Responses

Due to the significant problems with marking and the impact this has on the validity and reliability of the results, marking needs a multifaceted, urgent and substantial intervention. We recommend that:

- 3.15.5.1 Quality be the most important criterion for appointing markers. Qualifications and experience are critical to ensure the validity of examinations, so markers at all levels of seniority must have the required qualifications and experience.
- 3.15.5.2 Potential markers be required to demonstrate their competence prior to their being appointed. Subject matter competence tests are one possible means of establishing competence.
- 3.15.5.3 Non-education related criteria, such as those tainted by tribalism or political sectionalism, be eradicated from the system of appointing markers. Markers found providing false information about their experience and qualifications must be prosecuted and referees found to have supplied false information should be held accountable.
- 3.15.5.4 On-site training during marking be suitable for well-qualified and experienced markers, and so of a high quality and specific to the examination papers. Training must never be reduced to being general and introductory because markers lack competence. Marking of NSC examination scripts should not be viewed as a basic training opportunity, but could be regarded as enhanced professional training.
- 3.15.5.5 Markers who fail to meet the required standards for marking papers be barred from continuing to mark. Should a marker be fired from the marking process, all papers previously marked by that marker should be remarked in full.
- 3.15.5.6 Marking representatives from all provinces be compelled to attend all related and appropriate memorandum discussions. No changes to

the memoranda should be allowed outside of the specified policies without approval.

3.15.6 Passing scores

While there are no passing scores in the traditional sense of test development, we recommend that:

- 3.15.6.1 The issue of comparability of standards across papers (such as between languages at certain levels) should be addressed.
- 3.15.6.2 Uniform rubrics and test specifications frameworks to establish commonality in standards for home language, first additional language and second additional language papers be implemented as soon as possible. (This will partly address the need to raise the quality of the language papers.)

3.15.7 Reporting examination results

There is some concern in the quality assurance sector that there is a decline in the reporting of irregularities. There is a related concern that some provinces do not encourage reporting. We recommend that:

- 3.15.7.1 This concern be investigated to test its validity, as, if valid, it would require urgent attention.
- 3.15.7.2 In general, provinces and examination centres be encouraged to accept accountability for irregularities and be required to report them. This requires both that the consequences be in proportion to the irregularity being reported, and that firm action be taken in cases where irregularities are found to have occurred, but no official irregularity report was submitted.

3.15.8 Item Banking

We recommend that the department consider establishing an item bank, initially compiling items for one or two subjects to explore its effectiveness and impact in the

South African NSC context. This would allow the use of appropriate scientific methods to investigate quality and standards thoroughly on an on-going basis.

3.15.9 Examination Technical Report

We recommend that, as good practice, DBE produce an examination technical report which contains systematic, thorough, detailed documentation of validity evidence as well as a number of recommendations.

3.15.10 International benchmarking

We recommend that external, international evaluation of papers be used more effectively, and that, as a rich source of critique and engaged feedback, reports be:

- (a) Shared with external moderators as a source of reflection and to strengthen their ability to make appropriate demands
- (b) Shared with examination panels
- (c) Used to inform professional development.

3.15.11 Standardisation

We recommend that the status quo remain, although the time allocated to the standardisation processes must be increased so that the results can be effectively standardised. This will be particularly necessary in 2014 as examinations will be based on the new curriculum and the previous norms used for standardisation will no longer be appropriate. The process is likely to require more time for checking and reviewing the data.

NOTES

¹ The terms items and questions are used interchangeably in this chapter.

¹ Umalusi external moderators visited a number of provinces in some subjects and verified the marking in a number of centres. The findings were summarised in a QAA Schools Sub-unit report

“Summary of key findings: 2013 marking verification (Provincial Education Departments)” which is an internal Umalusi report

¹ Bearing in mind the discussion in Chapter 3 regarding the uniqueness of the EFAL position requiring higher standards than the typical First Additional Language

¹ Referred to as the annual circus by commentator Prof Jonathan Jansen

¹ This finding is contradicted by the CIE evaluations of 2008, 2010 and 2012 curricula and examinations in section regarding benchmarking of examination papers.

¹ In 2010 7.48; 2011 7.15; 2012 6.8, 2013 5.7 an average of 6.8 over 4 years

CHAPTER 8

HOME LANGUAGES AND THE STANDARD OF AFRICAN LANGUAGE PAPERS

INTRODUCTION

The standard of the African languages Home Language papers has repeatedly given rise to questions over the last five years. The issue has been controversial, not only in public, but also in interactions between Umalusi and the DBE during the standardisation process. It is addressed here as one of the main criticisms of the NSC which the Committee's terms of reference requires it to explore.

The NSC provides for all official languages to be offered at the Home Language, First Additional and Second Additional levels. In the past three years, the largest group writing at Home Language level has been learners writing isiZulu followed by those writing English (see Figure 8.1 below). There has also been a significant increase in the numbers taking these two languages compared to the other languages over this time period, with more than 130 000 learners writing isiZulu and 110 000 writing English in 2013.

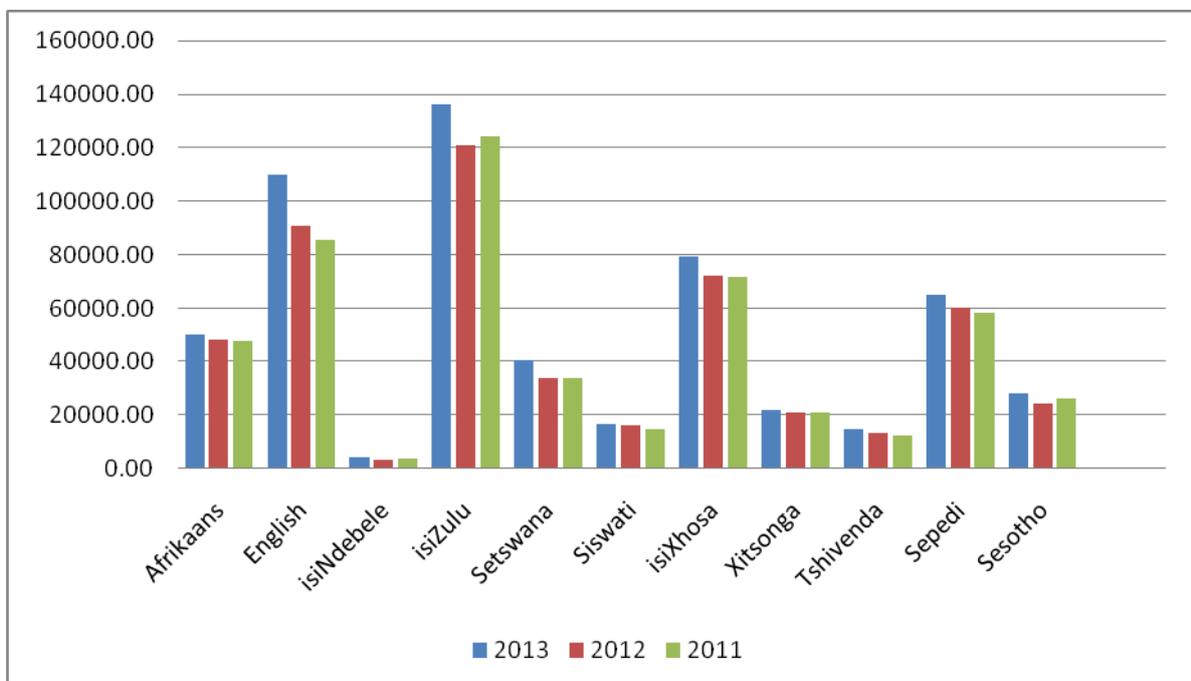


Figure 8.1 Number of learners taking languages at Home Language level in the NSC 2011-2013 (Data from Umalusi)

1. PERFORMANCE OF LEARNERS IN AFRICAN HOME LANGUAGES

One key issue that has arisen as a criticism of the NSC is that the mean scores are very high in the African languages compared to Afrikaans and English and all other subjects in the NSC. On the raw scores learners writing Xitsonga and Tshivenda papers attained an average of more than 70% in 2013 (see Figure 8.2 below) which is disproportionate to their performance in other subjects. Furthermore whilst the mean scores for African languages are all above 60%, the mean scores for Afrikaans and English are below 60%.

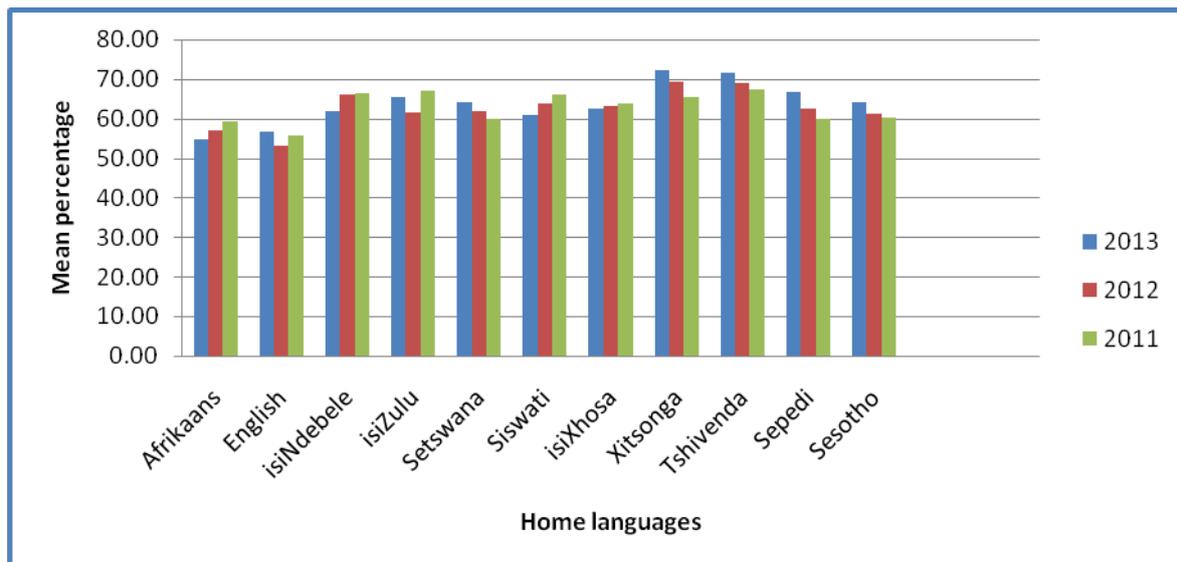


Figure 8.2 Performance of learners by home language 2011-2013 (Data from Umalusi)

One contributing factor to this is the high pass rate in the African languages as Home Language, where the pass mark is 40%. Figure 8.3 illustrates this, For African home languages, the percentage pass exceeds 99%. In Afrikaans and English it is below 95%.

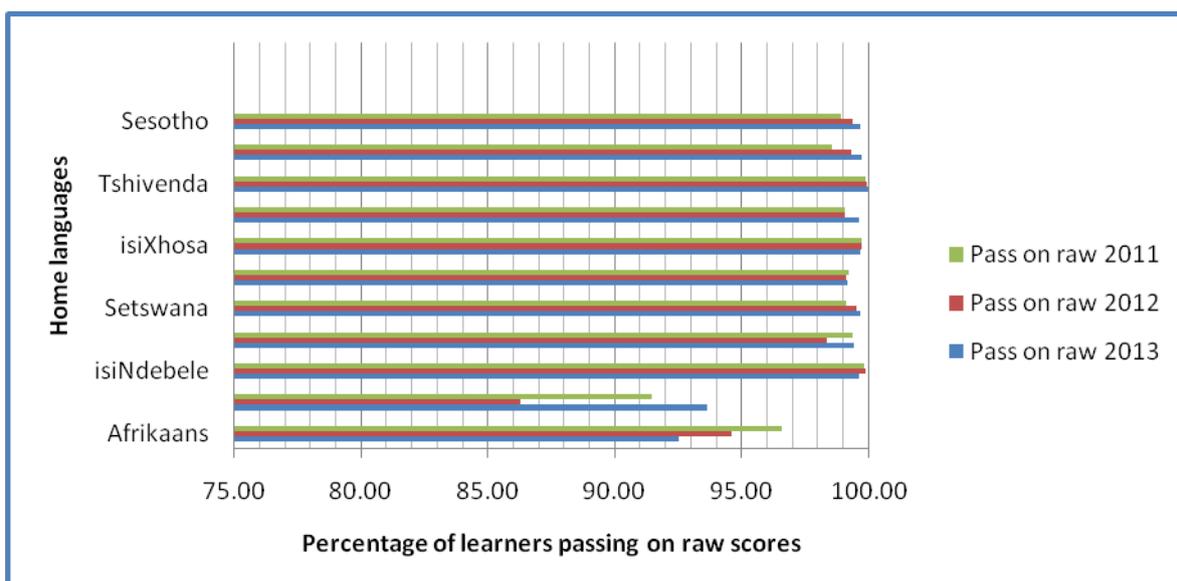


Figure 8.3 Percentage of learners passing at Home Language level on the raw scores in the NSC 2011-2013 (Data from Umalusi)

Even after the standardisation and some adjustments occur, almost all African languages still have a 99% pass rate, significantly above English and Afrikaans. Figure 8.4 shows this.

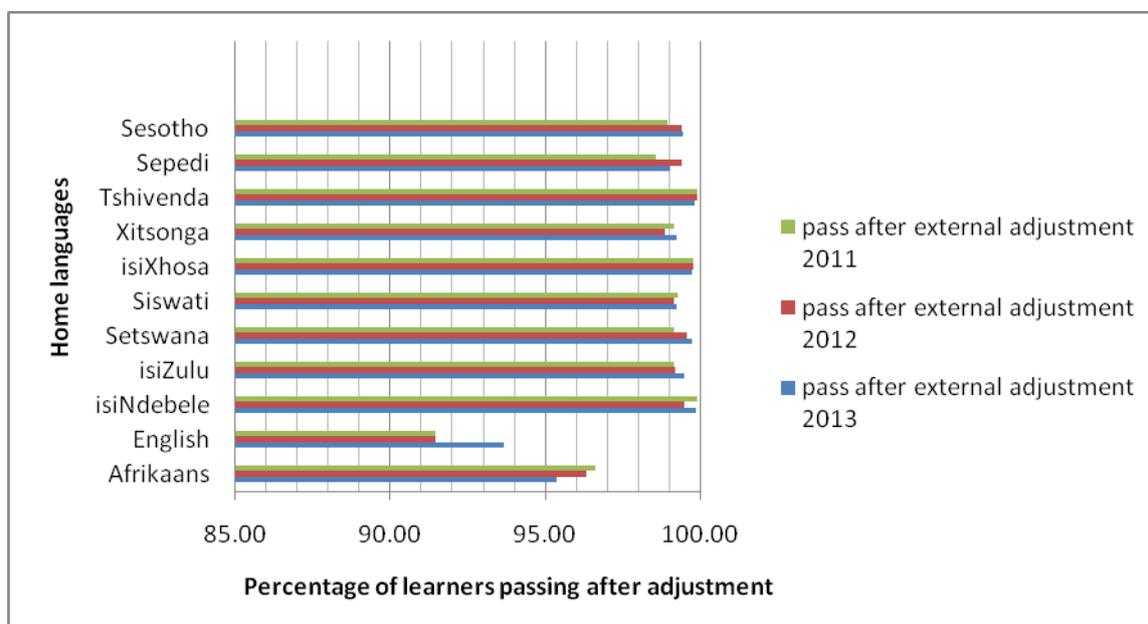


Figure 8.4 Percentage of learners passing at Home Language level on the adjusted scores in the NSC 2011-2013 (Data from Umalusi)

One possible explanation for this extraordinary phenomenon is that learners are required to pass Home Language to obtain their qualification. Moderators and markers are aware of this, as are the provincial authorities, and they experience pressure to provide learners with every opportunity to pass. There has been discussion for several years about three matters: the low levels of cognitive demand in the African language papers, the same materials being repeated annually for many years, and the lack of a common framework. A common framework for assessment has now been developed. It specifies that all those writing home languages should have to address similar looking papers. However, in practice, it is still clear that the papers differ in format and structure, in their mark allocation and in the level of the texts and the cognitive demand of the questions. This fact, together with the marking problem, results in the inflated marks for African languages.

Recently an Umalusi investigation explored whether the assumption was valid that, if learners fail their home language, they are likely to fail the NSC. The investigation revealed that in fact those African language HL candidates, who failed the NSC by not meeting the requirements other than languages, passed their respective African languages at the 60% level and above. There was no significant correlation with NSC results overall for learners writing African languages at HL level.

Only in the case of candidates writing Afrikaans HL or English HL was passing the Home Language examination a good predictor of whether or not they were likely to pass the NSC overall. In Figure 8.5 below, the percentage of learners who failed the NSC is represented in terms of the category of pass they achieved in their home language. For instance, in Afrikaans, of the learners that achieved less than 39% for Afrikaans Home Language, 80% failed the NSC. Of those who achieved 60–69% only 1.3% failed; at 70–79% only 0.3% failed and 80–100%, only 0.1% failed the NSC. Despite some slight differences, the overall pattern for the English HL group was very similar. The chances of failing the NSC were dramatically reduced if you obtained 60% and higher in Afrikaans or English Home Language.

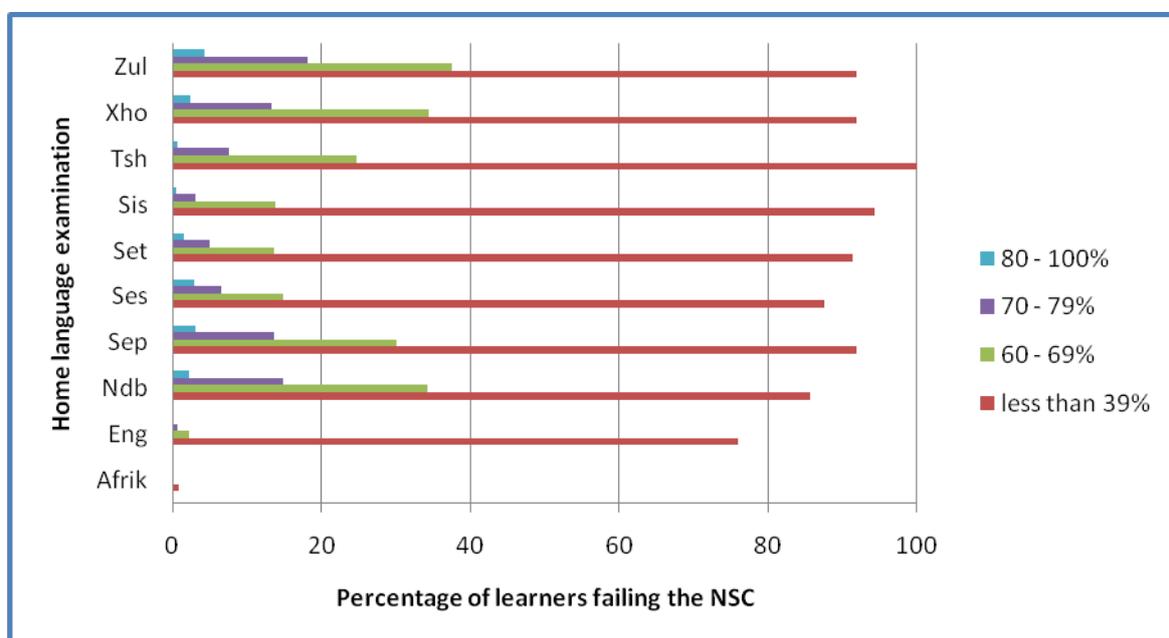


Figure 8.5 Percentage of learners failing the NSC in relation to their achievement in home language (Data from Umalusi)

This was not found to be the case for all the African languages. In particular in isiZulu about one-fifth (22%) of the learners who obtained 70% and above in isiZulu Home Language failed the NSC. Whilst that was the most extreme example, a similar pattern appeared for isiNdebele (17%), Sepedi (17%), and isiXhosa (16%). Notably, about a third of learners who obtained above 60% for isiNdebele failed as did those in isiXhosa and isiZulu.

These figures based on a broad body of data must be troubling. Clearly, a thorough investigation into the standard of African languages at HL level is required. The analysis conducted so far of the distribution of marks at HL level reveals an unusual distribution for African languages with very little discrimination between learners of differing ability. This

means that learners of lower general ability are just as likely to achieve high marks as those of higher ability. Ultimately, then, the marks are poor predictors of academic success and do not adequately demonstrate the ability of the learners for purposes of work or higher education. This seriously undermines the credibility of the African languages in the broader community, including amongst learners and their parents. There is a need for an open discussion about the examination of African language papers from an assessment perspective. If the same curriculum and assessment guidelines are proposed for all home languages in the curriculum, then the assessment framework and guidelines should be equally demanding across all the languages assessed at a particular level.

During the 2013 standardisation process, an attempt was made to explain the differing results and standards across the languages by the claim that African languages were all unique. It was argued that therefore no common framework could be used. This is unacceptable as a measurement principle and it defies the existence of a national curriculum for languages at the three levels. Common standards are necessary at Home Language, First Additional Language and Second Additional Language levels. A claim of uniqueness in this regard undermines the credibility and standing of the languages for learners, teachers, and the culture as a whole. With so much at stake it must be a matter of major concern when internal and external moderators of the African languages feel that they are under pressure from a variety of sources to simplify papers which are at an appropriate level. In their support, two points need to be made here. (1) As Figure 8.5 shows, a higher pass rate in African languages at HL level does not translate into a higher pass rate overall. (2) One cannot demand a lower standard for the African languages while trying to elevate their status and relevance.

The issue of resources available in the African languages needs urgent attention. During the standardisation process over the past five years, it has emerged that in some African languages the set works have been prescribed as many as 26 years in a row. There has been no variety to engage learners and teachers, and to suggest the range of what is available in the languages, and so their sophistication and standing. As a rule in all languages, set works should be changed on a regular cycle and should not be prescribed at the same level in sequential years. The learning benefits and learners' exposure to a lively range of literature is undermined when the same set works are used annually. Teachers, too, must become bored with the limited material, with a knock-on effect on their learners' interest. This complex of issues should be investigated and addressed as soon as possible. Whilst there are concerns in the smaller languages about having a sufficient diversity of

literature for set works at Grade 12 level, the publishers have repeatedly stated that there are enough resources to be considered.

2. RECOMMENDATIONS

The following conclusions are drawn, based on the data and informed by the discussion in this chapter:

- 2.1 The standard and quality of African home language examination papers is yet appropriate for the requirements of the NSC curriculum.
- 2.2 The obvious inflation of the African language HL marks serves to undermine the credibility of the African languages and the NSC as a whole.
- 2.3 The results of the African languages HL examinations fail to provide valid and reliable information about learners' ability in those languages.
- 2.4 The results are poor predictors of performance in the NSC and do not provide the workplace or the higher education institutions with adequate information about learners' ability or potential.
- 2.5 Discussion about how to improve the standard and quality of the African language HL papers is affected unnecessarily and negatively by introducing political considerations.

Accordingly, in addition to the general recommendations in chapter 7, we recommend:

2.6.1 A thorough investigation into the standard and nature of the assessment of the African languages at HL level.

2.6.2 An open discussion about the examination of African languages from an assessment perspective.

2.6.3 Urgent attention to the issue of Grade 12 having adequate academic and literary resources for African languages and to the selection, dissemination and use of these resources.

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