

Perspectives and Lessons on Public Systems Improvement

The case of the National Examinations
System



basic education
Department:
Basic Education
REPUBLIC OF SOUTH AFRICA





About Us

National Education Collaboration Trust

The National Education Collaboration Trust (NECT) was formed in 2013 as a direct response to the call by the National Development Plan (NDP) for greater collaboration amongst social partners to improve the education outcomes. It is the result of a collaboration between government, unions, business and civil society, it operates independently of all of its stakeholders to be an honest broker and a creative force for the change we need to see if 90% of learners are to pass maths, science and languages with at least 50% by 2030.

Driven by the NDP objectives, the NECT aims to achieve marked and sustainable improvements through the active collaboration of the best capacities in society.

The NECT has selected eight districts, representing 20% of all schools in South Africa, in which to roll out its programmes. 10% percent of these schools, Fresh Start Schools, receive intensive support and continue to serve as a trial for the national roll out of NECT interventions.

www.nect.org.za

This case study was made possible by the collaboration with the Government Technical Advisory Centre (GTAC)

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1. Introduction and background

1.1 The origins of the case study

Large public service organisations are under continuous pressure to deliver public services and generally devote little time to learning. *“A learning organization is one that is able to change its behaviours and mind-sets as a result of experience. This may sound like an obvious statement, yet many organizations refuse to acknowledge certain truths or facts and repeat the same behaviours over and over again.”* The National Education Collaboration Trust (NECT) identified ‘learning’ as one of the key strategies for spurring innovations in the education system. In 2014 the NECT identified the national examination system as a focus function from which lessons could be drawn about systems improvement. The choice of the examination system was based on the observation that the annual examination, which comes second after the national general elections in size and scope, are being organised without major glitches. This was not the case 20 years ago, when examination papers were leaked en-mass and a large proportion of schools would not receive their results. Mpumalanga was the hardest hit by such problems, up to the point where the national department took over the examination function to assist the province in building a secure and functional system.

The case study has been crafted with the following intentions in mind:

- Identifying improvements in the national assessment system
- Identifying key elements of success
- Identifying potential lessons that can be applied within the examination system, to other functions in the education system and to other public sector organisations

The case of the South African Examinations and Assessment System demonstrates, in the context of multi-tier public sector functions, the importance of sound processes, public accountability and centralised, but participative, policy implementation approaches

The overarching intention of the case study is to contribute to the improvement discourse and the culture of learning in the education sector. The case study is based on a technical evaluative report that involved an extensive literature review and interviews with over 50 practitioners, managers and education experts.

This paper is a follow up to a case study research on the national senior certificate (matric) examination system conducted for the National Education Collaboration Trust (NECT) in 2014 and 2015. The case study was commissioned in the latter part of 2014, by the National Education Collaboration Trust in agreement with the Department of Basic Education. The national examinations system was chosen for the case study, as it has achieved significant improvements that have been sustained over time. It is believed that the lessons learned within the examination system could have broader application within the education system and other spheres of the public sector. The primary information was largely drawn from Mpumalanga, North West, Eastern Cape and Western

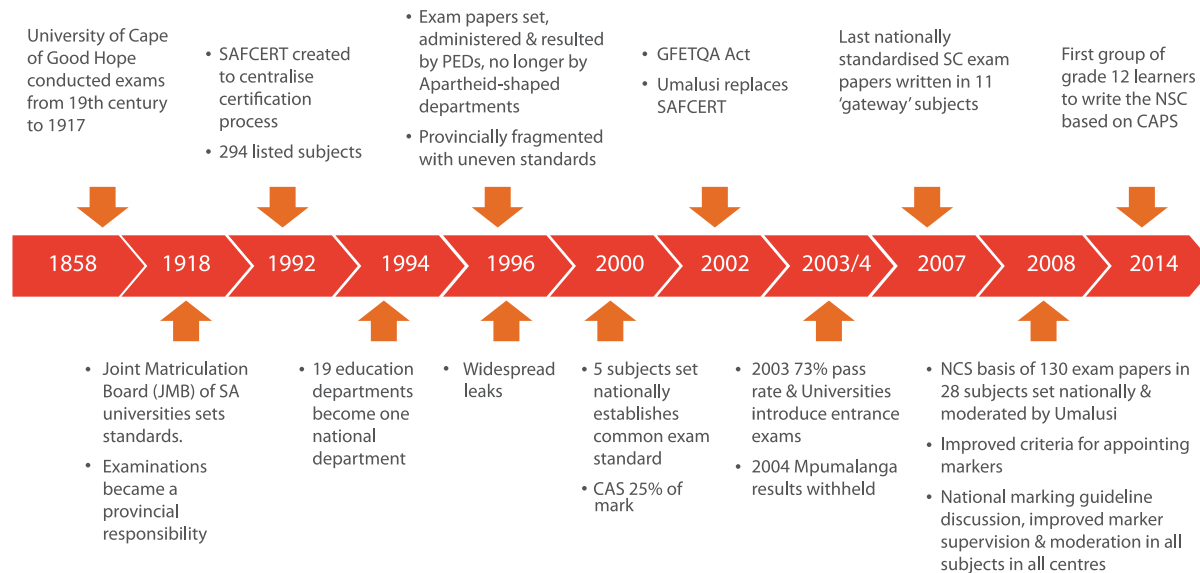
Cape provinces as well as the national Department of Basic Education and Umalusi. The intention of this document is to present highlights of the case study² findings and then to draw lessons for consideration both in relation to the examination system and in relation to the wider education and schooling system in South Africa.

1.2. The 156 year old examinations system

Very few people, including those that work in the examination system, know that they are part of a 15 decade old system. The first 136 years of this system were characterised by multi-standards and a fragmented, racialised approach to exams. It was spread across 19 sub-systems. Below is a timeline that illustrates key changes since 1858. It is evident that a few key changes happened between 1858 and 1994. Since 1996, seven key interventions changed and transformed the shape of the examinations system.

¹ What are the Characteristics of a Learning Organization? Prof. Eve Mitleton-Kelly, London School of Economics; <http://gemi.org/metricsnavigator/eag/>

² Case Study of the National Examination System for the National Senior Certificate. Prepared by Gemma Paine-Cronin, Organisation & Strategy Development, Design & Evaluation Service. gemma@hixnet.co.za. August 2015.



Moving from 19 departments to one, and a single examination system, was a complex process. The complexity was compounded by the fact that responsibility for education after 1994 was shared between a national department and nine provincial departments. The past 20 years saw enormous changes of the system into one unified system that runs almost like clockwork.

Building a single coherent system has involved, and continues to involve, a negotiated process of: establishing standardised curriculum frameworks; systems development; standard setting; standardised administrative and management arrangements. Provinces have had to accept that the setting, marking and resulting of examinations - that they in one form or another controlled from 1996 to 2008 - became a responsibility that was increasingly controlled by the Department of Basic Education. Many features of the National Senior Certificate examinations system were centralised and standardised by 2008, resulting in a single national examinations system (still with variation in policy, systems and practice across provinces). The process of centralisation continued after 2008, with all changes being made through a collaborative agreement with the Provincial Education Departments..

An important question is: what accounts for the improvements witnessed in the past 20 years? How does the collective responsible for examinations manage to run this complex process efficiently in a multi-tier set up? An improved national system was introduced in 2008 and the National Curriculum Statement became the basis for all papers in all subjects in the final Grade 12 examination. An extensive, nationally

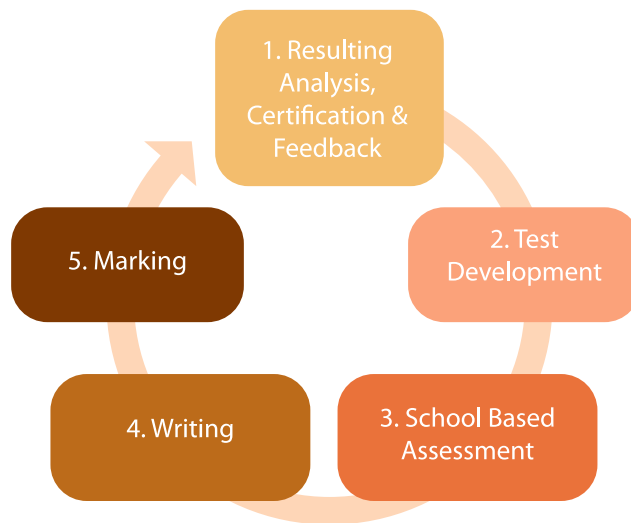
standardised system has evolved, including the integration of a variety of policy statements (related to curriculum and assessment) into a single policy. The national Curriculum and Assessment Policy Statement finally became the basis for the National Senior Certificate examination in 2014. So how was this massive change achieved?



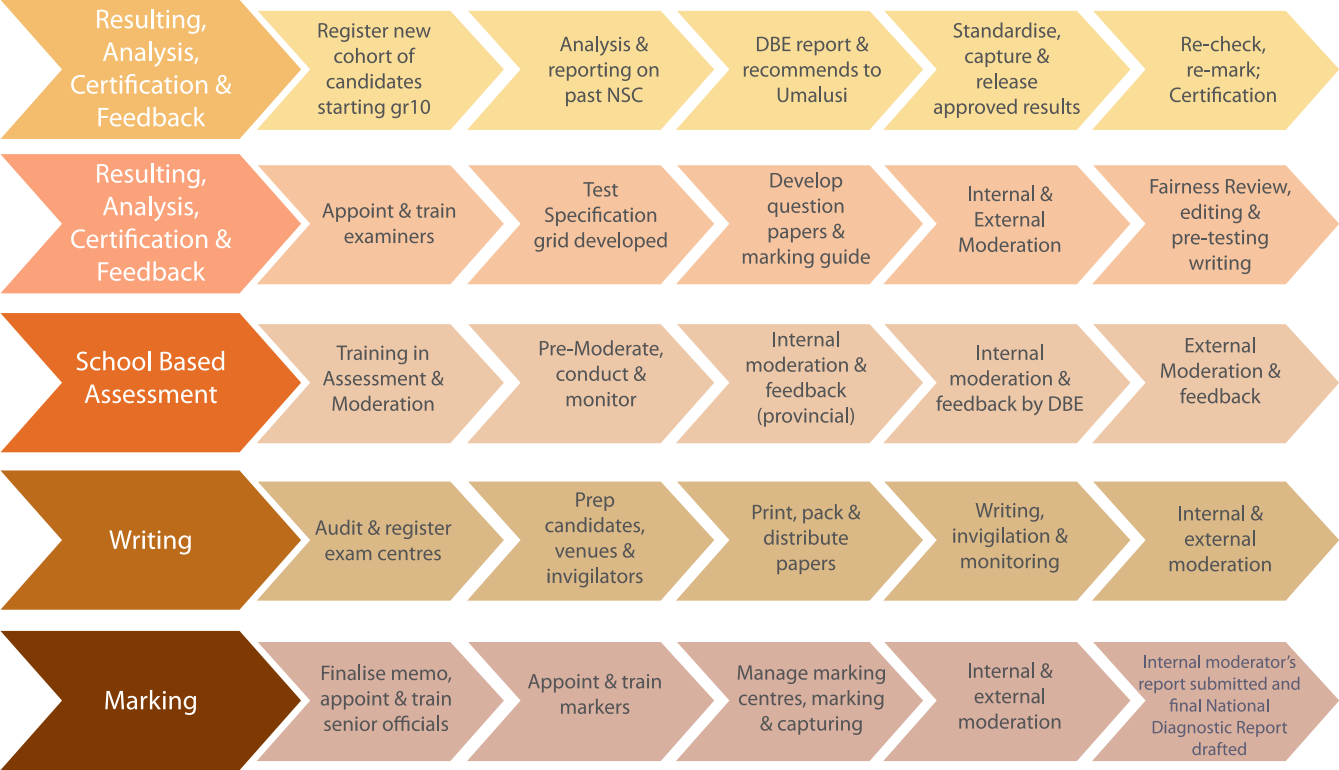
2. Breaking with the past: Improvements since 2008

2.1 Overall changes

The system has been continuously evolving since 1994, and this has intensified since 2008. There are various versions of the examination cycle. For the purposes of the case study, a standard diagram representing the sequence of “sub-systems” and their components (as used by the Department of Basic Education) reflects the following five sub-systems:



The system is complex, and the complexity is illustrated by the sequence of components or steps of each sub-system, as shown in the process map below.



So what are the key changes?

Standardisation has been achieved by developing a description for each of the steps in the process map. An integrated set of policies, regulations, standard operating procedures, guidelines and norms and standards guide the process.

Based on the process map, an annual Examinations Action Plan is developed. This records, in detail, who is responsible for what, what that responsibility entails and by when it must be done. The plans of provincial education departments are then aligned to, and based on, the national plan. This ensures integration, mutual accountability and the maintenance of the critical path required to ensure that crucial deadlines are simultaneously achieved in all nine provinces.

The key role players - heads of examinations in provincial education departments, and often the relevant administrative staff as well - have been actively involved in developing and agreeing on the policies, procedures, frameworks and plans. The standard operating procedures are continually evolving with amendments suggested by the Department of Basic Education, provincial education departments or Umalusi on the basis of an annual review (and extensive assessment of each cycle of examinations) and at bi-monthly meetings between the Department of Basic Education, the heads of examinations and other relevant stakeholders that constitute the National Examinations and Assessment Committee (NEAC), previously referred to as the Interprovincial Examinations Committee (IPEC).

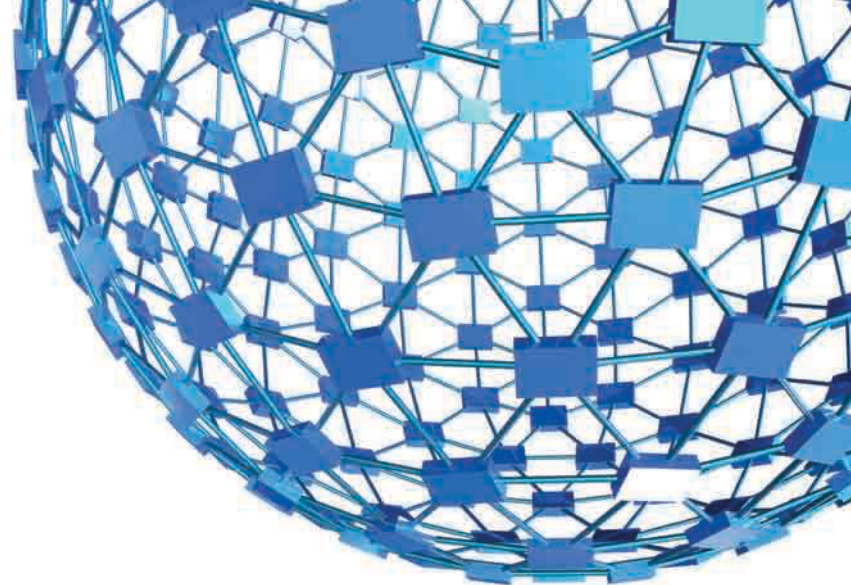
Each year, for each examination, in each examination centre in each province, the examination must start at exactly the scheduled time in order to ensure the integrity and fairness of the examination. For example, in December 2014, 688,660 learners started the writing of the 130 papers in 6,716 centres in 9 provinces over 29 days at exactly the same time as per the scheduled time table.

The key changes and elements of success for each of the sub-systems are described in more detail below:

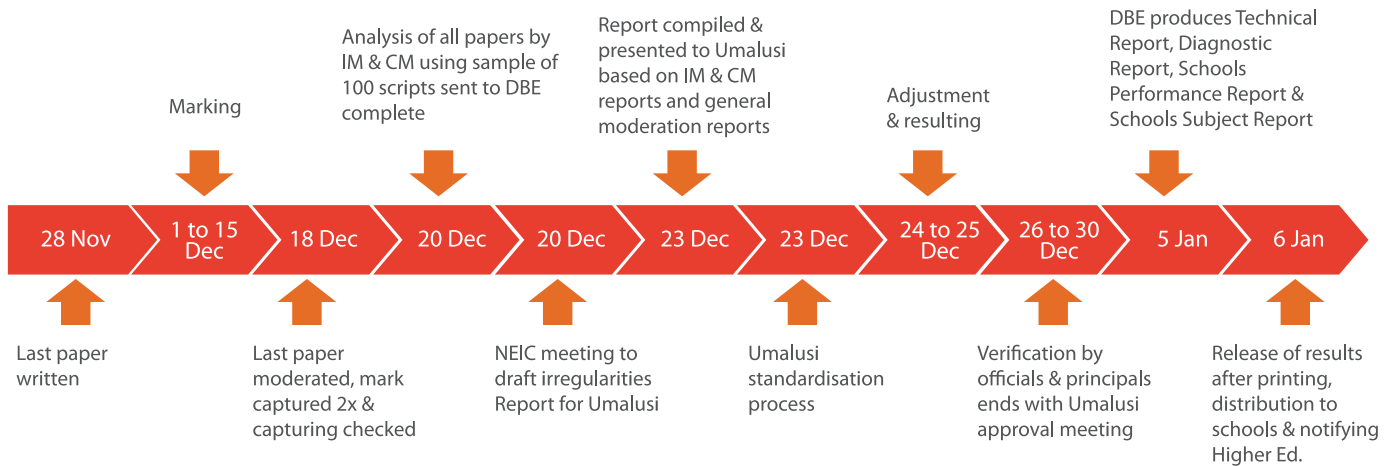
2.2 The “Resulting, Analysis, Certification and Feedback” Sub-system

The process of ensuring the integrity of National Senior Certificate certification starts in Grade 10 when learners register their choice of subjects for matric. This is captured on Integrated Examination Computer System (IECS) which must be accurately maintained and must record changes in subject choice. It also tracks whether learners have met the requirements for the National Senior Certificate through three years of school-based assessment and examinations. The accuracy of this computer is critical, as it is used to issue final senior certificates. This has evolved into a relatively smooth-running part of the process.

The detailed time line below, which still does not contain all the steps involved, gives some indication of the scope of this sub-system.



Well developed and maintained electronic support systems are important
Regular evaluation is needed to identify weaknesses
Reviewing of performance against publicly stated goals drives continuous improvement



At the beginning of each new examinations cycle an evaluation is done and changes necessary for improvement are identified. A series of review sessions are convened and one of them is the review of the question paper conducted during the marking process. This is achieved by analysing each paper, including each question and each sub-question of each paper separately in each of the 9 provinces (this is done by an internal moderator and by the chief marker for the province, using a sample of 100 scripts). This review together with the analysis of the learner results, are drawn together into a set of reports which are made available by late December or early January.

The “high-pressure” environment is illustrated by the fact that there are only 36 consecutive days during which: the last script is written; it is marked and moderated; the results are captured; a report is written on every paper; marks are checked and reported to Umalusi (who standardise and approve); and four reports are written, printed and distributed. These reports include a process report on the technical aspects of the examinations, a diagnostic report based on the review of the papers and two reports detailing the performance analysed by school and subject. The achievement is that, until 2008, there was only one national technical report. From 1996, provinces processed their own data. Standardisation was done by SAFCERT and then Umalusi (from 2002) by two statisticians appointed by SAFCERT going to each of the provinces and conducting a standardisation meeting in each of the provinces, which lacked the true semblance of a national standard. Since 2000, when the five national question papers were introduced, a national standardisation meeting was hosted for the five

subjects, but provincial standardisation was still hosted in the remaining subjects, until 2008 when all subjects were set nationally and standardised nationally.

Examination officials who are also educators or subject advisors indicated that the diagnostic reports are widely used by teachers to plan for improved results

The key lesson of this change is that the scale of gathering, collating and analysing data (in order to feed back the information rapidly into the system) creates an enormous potential for the system to reflect, adapt and improve based on experience, concrete evidence and evaluative judgement. This is a significant achievement.

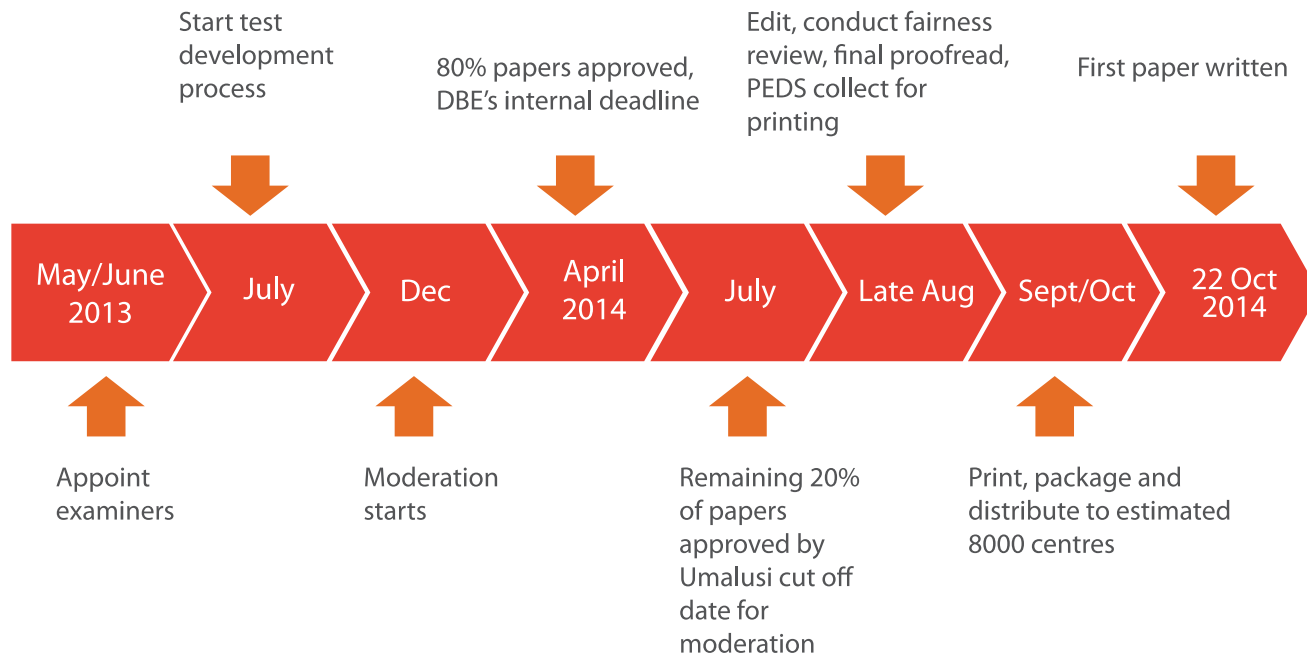
In addition the gradual transformation of the system from a provincially based examination system to a nationally based examination, through collaboration by the nine provinces has contributed to the setting of a single national standard.

The reports on the National Senior Certificate are viewed as a key mechanism for driving improvement, as these reports shine a spotlight on provinces, districts, schools and even teachers. They “make public” the information on their performance in the National Senior Certificate as a whole and in key subjects. This systematic reviewing of performance against publicly stated goals and targets is a key element of the continuous improvement that is being achieved.

2.3 The Test Development Sub-system

Prior to 2008, papers that were set at provincial level were generally developed by one individual and moderated by an external moderator at SAFCERT / Umalusi. These were then sent to a SAFCERT moderator (by post or courier), which was a risky process. A SAFCERT / Umalusi moderator would liaise directly with the examiner. The finalisation of the paper was a matter between these 2 individuals.

As the timeline below indicates, the national setting of papers was gradually introduced from 2000. By 2007, 11 papers were written nationally. Up to 2008, the majority were still set at provincial level.



Test development is guided by the new National Curriculum and Assessment Policy Statement. This is a single, comprehensive, and concise policy that has replaced the Subject and Learning Area Statements, Learning Programme Guidelines and Subject Assessment Guidelines for all the subjects listed in the National Curriculum Statement from Grades R – 12. Test specification grids assist in achieving consistent standards, despite minor variations in examination papers each year. They demonstrate how examiners have ensured the alignment of the content and skills assessed to the CAPS in terms of weighting, spread of questions and mark allocation.

Internal moderation by the Department of Basic Education and external moderation by Umalusi aims to manage the comparability of standards. Umalusi is responsible for ensuring that question papers and marking guidelines are “correct, fair, valid and reliable”.

Panels and cycles of internal moderation have been introduced to ensure a high standard and the question paper is now the product of rigorous engagement between subject specialists by the time they are submitted for external review. This is a significantly more rigorous process than was undertaken previously.

However, even with the internal and external moderation, edits and a fairness review, there are still some errors appearing in the papers. Three areas are singled out by Umalusi and relate to the variability of standards across subject areas and papers:

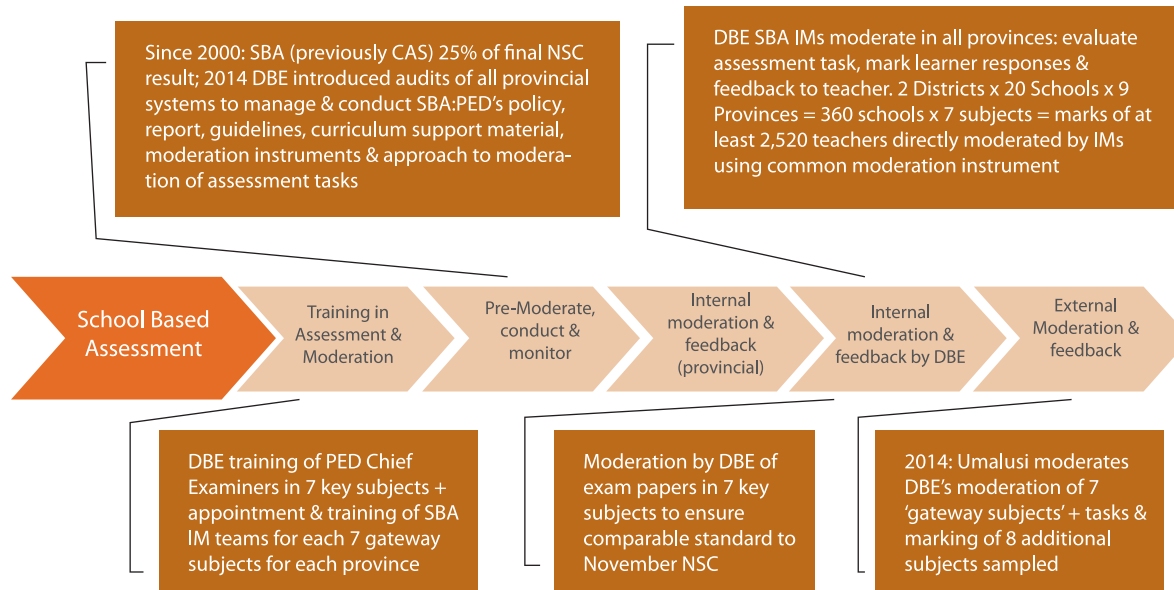
- Deadlines for completing the setting of exam papers and internal moderation processes are not always met.
- The quality of the papers developed varies - the languages were singled out as often falling below the required standards when presented for external moderation.
- There are questions as to whether analysis grids are always developed and used effectively to guide the development of examination papers.

This is one of the sub-systems where the need for further improvement is flagged by many. It is suggested that a more diagnostic discussion is needed to probe this.

The challenges in this part of the system could indicate that it is more difficult to achieve universally high standards in a system that is complex and requires highly specialised skills, compared to a system where the tasks are more routine and straightforward. This highlights the importance of the development of a common problem analysis and strategy for addressing more complex and difficult challenges. Complex systems require thoughtful reflection on practice, learning and adaptation in order for them to continuously improve. Not doing this risks system stagnation, degeneration and collapse.

2.4 The School Based Assessment Sub-system

School Based Assessment involves the administration of assessment tasks by teachers over the year (and before that in grades 10 and 11) as well as the development and maintenance of files with the necessary evidence of learner attainment. The scope of this sub-system is illustrated below.



A key challenge appears to be the time-line as outlined above and a general shortage of staff in the national examinations unit.

The trend is towards increasing the levels of standardisation and centralisation and intensified monitoring and moderation. The aim is to ensure that the required nationally agreed standards are met. In the past, continuous assessment tasks were designed and managed by the teacher within a fairly broad curriculum specification. This resulted in uneven quality of assessment, which could be linked to uneven assessment and moderation capacity of teachers. This could compromise the readiness of learners for the National Senior Certificate examination.

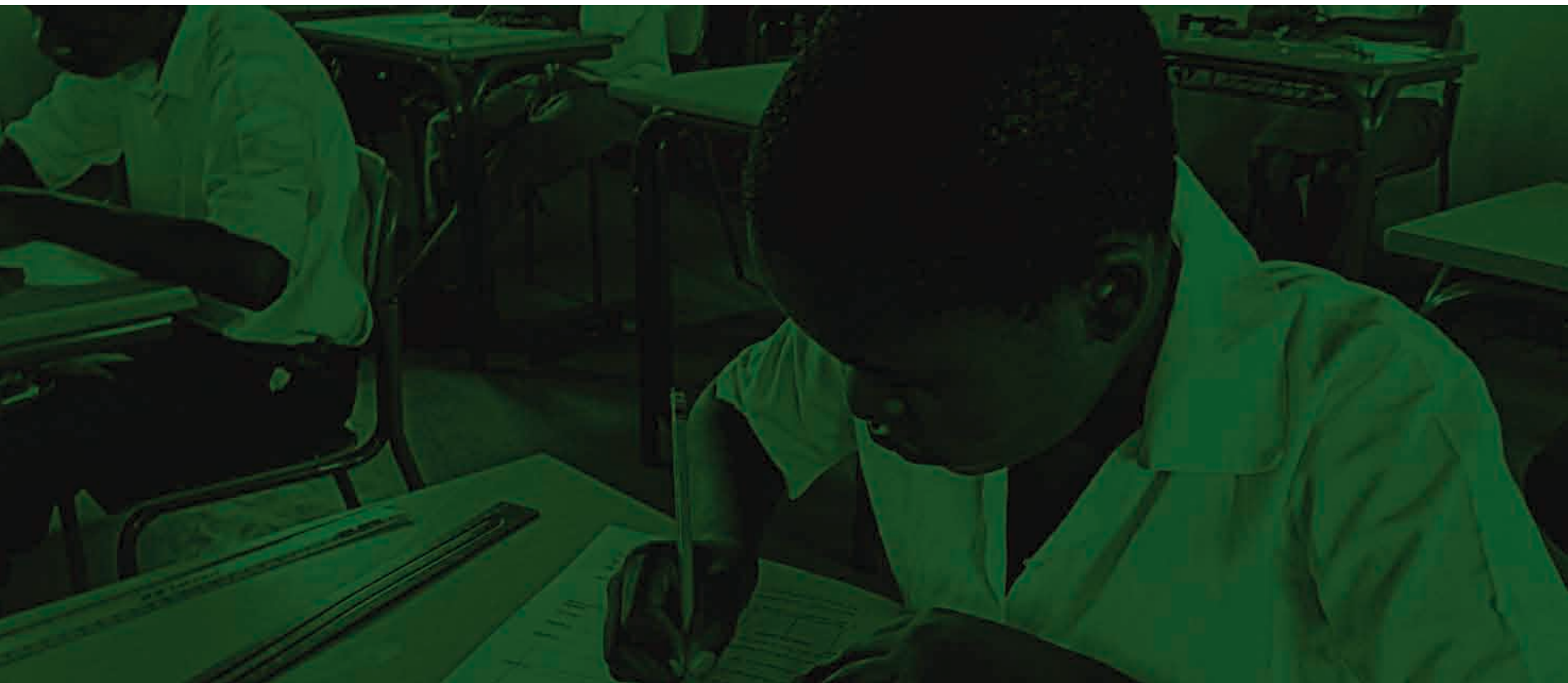
This is one of the more complex areas of examinations and assessment and one where it is more difficult to achieve short term change. It is dependent on teacher practice and is directly affected by the unevenness of teacher capacity. There continues to be evidence of the need for significant improvement in this sub-system. There is evidence that the results achieved by learners in school-based assessments are quite often inflated and in some cases, due to the low standard deviation, which is indicative of the teacher not being able to assess learners accurately, are rejected by Umalusi. What seems to be needed is diagnostic research into the reasons for



this and for the limited success of initiatives to address it. This however falls outside the scope of the examinations system and highlights how dependent the examination system is on an aspect of the wider education system that cannot be controlled from within the examination system.

Despite the above, there is evidence that the increased levels of standardisation, centralisation and the intensifying of monitoring and moderation, is to some extent improving the ability of teachers to meet nationally agreed standards of assessment and feedback.

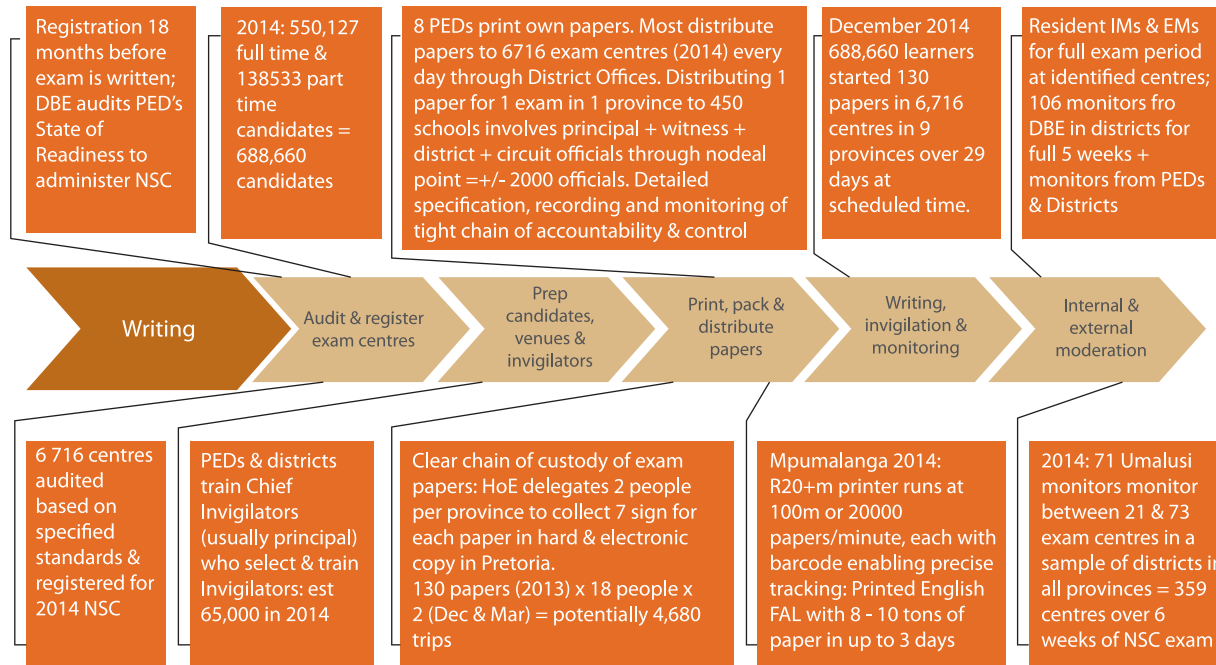
Failure to improve teacher capacity, including capacity for formative assessment, has been sharply criticised by the full range of role players, including Umalusi. There was predictably no-one who felt that you could genuinely and sustainably improve the system without improving what happens in the classroom which would only really result from significant improvements in teacher capacity rather than increasing control over, and standardisation of, what teachers do.



2.5 The Writing Sub-system

This complex part of the system is probably the one that shows the most marked improvements and achievements. It runs without any major glitch. Until the National Senior Certificate was introduced, there was little standardisation and no national process for reporting and collating data on irregularities - these were dealt with at provincial level.

The figure below illustrates the current scope of this sub-system.



All potential writing centres are audited and national and provincial monitoring takes place. Provincial readiness is evaluated and administrative and security systems audited. This is done on a peer review basis by a panel that includes provincial heads of examinations from other provinces. The Department of Basic Education extended the audit and

monitoring process even further to include site visits to the 81 districts across the provinces to assess their management of examination centres, nodal points and points for the secure distribution of examination papers and collection of candidates' scripts.

The actual writing of the National Senior Certificate at the end of each year takes place over six weeks during which hundreds of thousands of learners write papers in more than 6 000 centres across the 9 provinces over 29 days at the time scheduled for that paper. This is the culmination of an extensive logistical operation involving: the collection of the question papers from Pretoria; printing and packaging so as to maintain total secrecy about the paper; secure distribution to each centre; storage and eventual opening and distribution to candidates.

We all assist the institutions we have creatively redesigned to meet our various needs, NDP, 2014:17

There are coordinating structures at national and provincial level (National Joint Operations Centre and Provincial Joint Operations Centre) that include security services and disaster management agencies. These services have helped to ensure that even relatively unpredictable events such as floods or storms do not prevent candidates from writing the relevant

paper - for example, SANDF has flown papers into schools when necessary. This is a good example of inter-departmental collaboration.

A key feature of the national system is the cooperative manner in which the system is developed. Provincial education department examination officials, and specifically the heads of examinations, draw out the lessons of each cycle and "road test" different approaches and models. They then share results. These different approaches and lessons from experience are used to determine which examples of good practice are important and relevant enough (to all provincial conditions) to warrant standardisation in national standard operating procedures, norms and standards.

Each province has different budget allocations and staff compliments for public examinations. There is no standardised staffing framework or norms as yet, particularly because of the different financing frameworks of the provinces. This poses challenges for the standardisation of systems and processes and the acquisition of equipment necessary to maintain them.

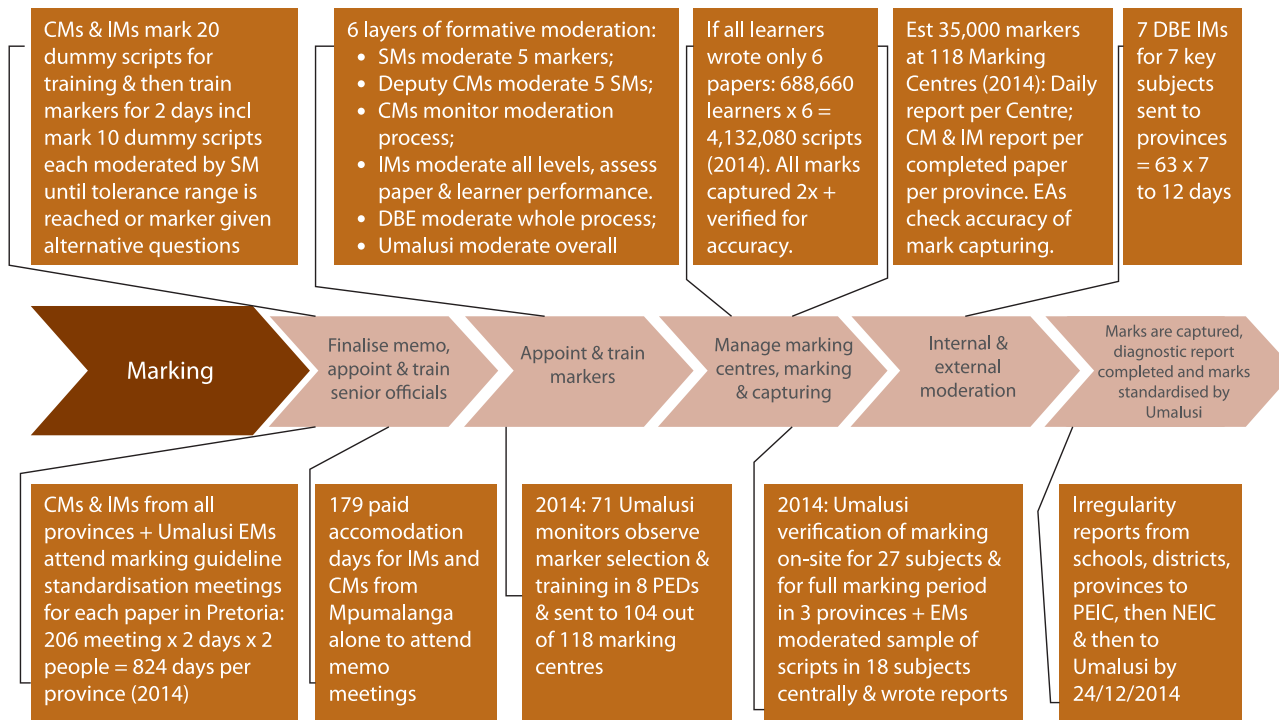
Despite the DBE and Umalusi reports indicating that there was full compliance with policy, regulations and criteria, and despite all the mechanisms in place for auditing all levels of the system, for monitoring and for reporting of irregularities, it subsequently emerged that there had been what are reported to be serious irregularities at examination centres in 2014. The fact that this could happen is unfortunate but the DBE has subsequently strengthened the examination system with regard to the management of examinations in all centres and this has included an audit of the risk profile of all examination centres and the invigilation at these centres is based on the risk profile of the centre. Centres with a high risk are not allowed to administer the examination. The examinations are taken over by the district office. Centres with a medium risk profile will have a resident monitor placed at the centre for the duration of the examination. This response confirms the speedy response of the examination system to situations that may compromise the credibility of the exams. However, a recommendation coming from the case study research indicates that it might be helpful for DBE to take the public into its confidence more in this way and build confidence in its capacity to understand and respond to problems rather than feeding an unrealistic expectation that there will never be cheating in examinations.



Public confidence can be maintained if an organisation accurately diagnoses a problem and develops mechanisms to prevent a recurrence

2.6 The Marking Sub-system

The final phase of the examination cycle is the marking phase. Here, fairness, consistency and reliability are critical and essential. Increased standardisation has once again been used in an effort to achieve the required level of quality. The standardisation has been made through an inclusive process whereby the role players actively participate in the process of standardising the systems, frameworks, norms and standards. The scale and scope of this sub-system is illustrated below:



Markers are appointed against a set of standardised criteria and chief markers and internal moderators have to prepare for and attend a two day discussion and training session to ensure that the marking guideline is clear, comprehensive and well understood. Chief markers and internal moderators will only be authorised to act in their required roles once they demonstrate a capacity for consistent marking within a specified tolerance range.

The supervision, moderation and verification of marking have been tightened by DBE and Umalusi since 2008. There are six layers of moderation and general oversight and a narrowed 'span of control' in which the marking of every 5 markers is supervised and 10% of marked scripts are moderated by a senior marker. The 5 senior markers are supervised and 10% of their moderated scripts assessed by a deputy chief marker. Chief markers and internal moderators complete the hierarchy of internal moderation and oversight while Umalusi provides external moderation through verification of a sample of marked scripts. The introduction of a 2% to 3% tolerance range has provided a defined basis for assessing the quality and accuracy of the marking.

The capturing of marks has also undergone increased standardisation. Two different data capturers will capture the marks on the Integrated Examination Computer System (IEC) the system has been set up to reject inconsistent mark entries so that errors will be picked up. In addition to this, examination

assistants check the marks on the script. This process is followed for each of the more than 4 million scripts that are marked during the marking process.

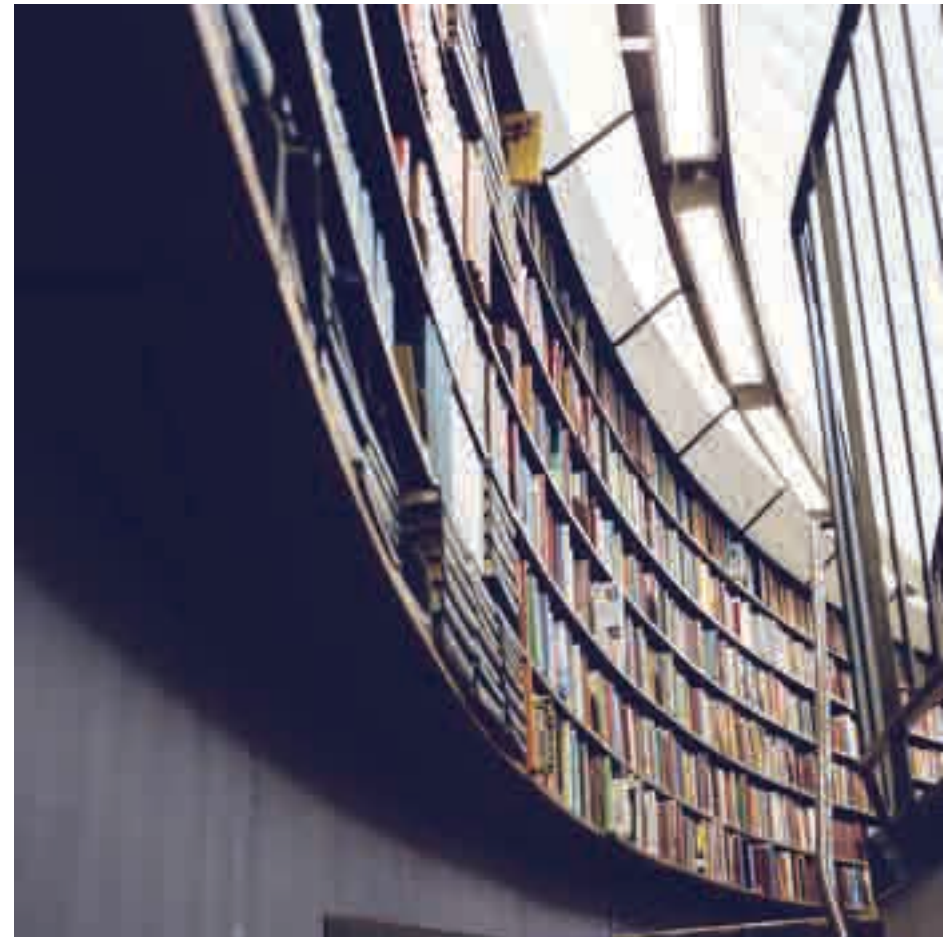
The result is that both the Department of Basic Education and Umalusi have reported greater levels of accuracy and consistency in marking. However, the Department of Basic Education and others indicate that there are still improvements needed to ensure an adequate level of consistent and accurate marking. This was generally attributed to the variable level of skill of markers but also of the moderators and the various levels of examination officials supervising the marking process. Umalusi reports that the criteria appear to be generally followed but that there were irregularities in some appointments, particularly of officials in supervisory roles in the marking process.

Over half of the examination officials interviewed at provincial level believe that there is still a worryingly high level of variation in standards from province to province and in the marking of different subjects

Some of the lessons emerging are: that there is a requirement for markers to demonstrate capacity before being appointed; that tightened supervision, moderation and verification leads to improved quality; and that defined tolerance levels assist with the assessment of quality of the marking process.

One of the most inspiring lessons emerging from the case study interviews was the extent to which examiners, markers or moderators value their engagement in development and review processes. Those involved in examinations participated in the various processes and debates (for example, on the development of the papers, marking guidelines, analyses of implementation and the writing of reports) and found these engagements to be hugely stimulating and motivating. Many noted that they have been teaching and working as examiners for long periods but continue to learn and develop both as subject specialists and as educators through each of these processes.

Officials put a high value on their engagement in development and review processes



3. Lessons to learn for the examination system

The factors that are seen to have contributed to improvement in the system cannot be easily separated from those that are regarded as inhibiting improvement. Many of those interviewed for the case study suggested that in some ways the system is a victim of its own success, and many of the factors regarded by some as having driven short term improvement are also regarded as a double edged sword potentially inhibiting long term improvement. The areas of disagreement in interpretation will probably lead to constructive wider discussion in the Department of Basic Education, provincial departments of education, and between them and Umalusi. The following key enabling factors have been identified:

3.1 Standardisation and centralisation: a necessary condition for establishing a single credible National Senior Certificate examination

The overriding driver of change identified is the increasing levels of standardisation and centralisation in the examinations and assessment system. A strong legislative and regulatory framework makes clear what everyone must do, and by when, and this enables coordination and accountability.

Firstly, standardisation of what results are expected (particularly through the Curriculum and Assessment Policy Statement), is regarded as very important given our history of a fragmented, racially-based education system with standards that perpetuated inequality. Secondly, is the standardisation of how the results and their examination are to be achieved. This is supported by a national curriculum and examinations system, which establishes a common standard for everyone taking the exam.

Underpinning this is an extensive framework of policy, regulations, norms, standards, and standard operating procedures developed since 2008 and which are used to develop uniform implementation plans and guides the layers of monitoring, moderation, supervision and reporting. These ultimately underpin any judgement on the validity and integrity of the National Senior Certificate examination.

Many interviewees have indicated the clarity on what must be done and how it must be done is highly reassuring in the 'high stakes' environment of examinations

In the last few years, the analysis of performance in the National Senior Certificate examinations focused on the extent to which the system has achieved the targets set in terms of the number of learners eligible for the study of a Bachelor programme at University, the number of passes in Mathematics and the number of passes in Physical Sciences. The performance targets set at a national level have been cascaded down to every level of the system through performance contracts with individual managers. This has been coupled with what many see as an explosion of standardised testing and analysis of performance that are used to monitor teachers and schools. The analysis and publication of the final National Senior Certificate results per subject in provinces, districts and schools makes the relative performance of role players a matter of public record.

The system works – papers set on time, written and marked. Everyone knows what they need to do. If this is a measure of working, this works better than most

The system is therefore output driven and one of the outputs is the National Senior Certificate examination. The performance of candidates ranks as one of the indicators of quality with regard to the performance of the schooling system as a whole. Officials all noted that the increased visibility of the relative ‘performance’ of teachers, schools, districts and provinces has

had a profound effect on focusing the attention of all role players, with each layer of management holding the next layer to account through performance contracts. Many believe this has had benefits in building a performance culture where district offices and principals take action to push teachers and learners to improve National Senior Certificate results.



A range of commentators and officials interviewed argued that there needs to be a far more dynamic discussion on what outcomes or results are needed to enable learners to achieve sustainable livelihoods, contribute effectively as citizens and continue with their education if they wish to. That will address the question of what the impact is that the Department of Basic Education wants to achieve.

Although the systems, processes and procedures are extremely well designed and clear, the one exception raised by officials is the lack of alignment between Umalusi processes and schedules and the integrated plans of the Department of Basic Education and the provincial education departments.

The unanticipated demands of Umalusi on the time and work schedules of provinces are regarded as a potential risk to the smooth running of examinations.

So although there is a general acceptance of, and support for, standardised and well-managed systems and processes to achieve increasing levels of accuracy and consistency, there is a healthy debate on whether this unintentionally takes the focus away from the content, relevance and meaning of what is learned and what is tested.

3.2 Public and political pressure - high visibility, high stakes and high pressure

The phrase used most to describe the National Senior Certificate was that this was a 'high stakes' examination for learners, but also an extremely high stakes process for the officials involved. The focus is on performance and the achievement of targets. It is also marked by fear of public

exposure and potential for embarrassment related to National Senior Certificate pass rates as well as resulting from errors or irregularities in the examination process.

As noted, the clarity of the standards that are embedded in the Curriculum and Assessment Policy Statement and underpin the pass rate has been generally welcomed. The challenges relate to whether these standards are adequate to the educational needs of learners and society and whether this model will enable sufficient reflection and learning needed to improve policy and practice over time or ensure that judgements on how the standards are applied are made in the interests of learners and society and not in the interests of looking good in the media and to seniors at all layers of the system.

So although the high stakes, high pressure environment is viewed as an important element of success, there is also awareness of the potentially damaging effects that this can have and the need to be vigilant over unintended consequences.

3.3 The examination team

When pushed about why this system is able to improve while other systems, in which performance targets and standardised procedures are just as well developed, do not seem to thrive in the same way, almost all interviewees responded with one or more of the following: 'collaborative relationships'; 'management style'; 'shared values of hard work'; 'dedication'; 'collective commitment to an error-free examination'. In practice, it seems that the effective cycles of review, problem solving, learning and adaptive management in largely collegial forums have kept the wheels on the system. Strong, regular and clear communication exists within the examination team.

Interviewees noted that this approach to inter-departmental co-operation is rare in government. Most believe that it rests on the leadership style of a series of national heads of examinations who have not adopted the distance or control orientation towards the provinces that leadership in other entities are regarded as applying. The same issue was raised in regard to the provincial leadership of examinations and assessment. In the two provinces visited, the feeling that the exam team was a non-hierarchical group in which mutual cooperation and the capacity to work together to 'get it done' very largely predominated.

Regarding staffing, there is stability and continuity – there is a low turnover of technical staff, and some staff members

date back to pre-1994 at senior levels. This implies a strong institutional memory.

It seems as if there is more to driving improvement in the examinations and assessment system than simply compliance with rules and procedure. This lies in the extent and nature of shared values and levels of commitment to the success of the whole system among officials, rather than simply taking responsibility for their small piece of the system. Morale, motivation and commitment to the achievement of the overall result of a zero-error National Senior Certificate examination are evidently high in the 'exam team'. Hard work, strictly maintaining the security and integrity of the process and delivering to plan are values that are not only strongly 'espoused' or professed, but are enacted values of the vast majority of examination staff at all levels and spheres. People are not just fulfilling duties. They are willing to work impossibly long hours, work through Christmas and other holidays and they share war stories that highlight pride in the fact that they came through despite near impossible odds. The stories speak to the underlying pride and commitment to a shared set of values. There is evidence of a strong shared culture across spheres and provinces. Co-workers will actively express their displeasure with those who breach this culture and the sense of mutual dependence on each other's reliability is high.

Most of those interviewed said, in various ways, that being part of the decision-making builds a sense of responsibility to make sure the agreed plans work. Also, reputations are made to count.

3.4 Support and/or lack of interference from 'the top' in appointment of people

Examination administration is an area in which appointments are made on the basis of the required level of knowledge and skill. The best person for the job is generally selected. This 'protection of the selection process from interference' is generally attributed to the fact that the National Senior Certificate is a 'high stakes' enterprise, subject to intense public scrutiny and one in which everyone from the top political leadership to the front line staff have a stake in avoiding public embarrassment.

3.5 Intensified monitoring, moderation and reporting

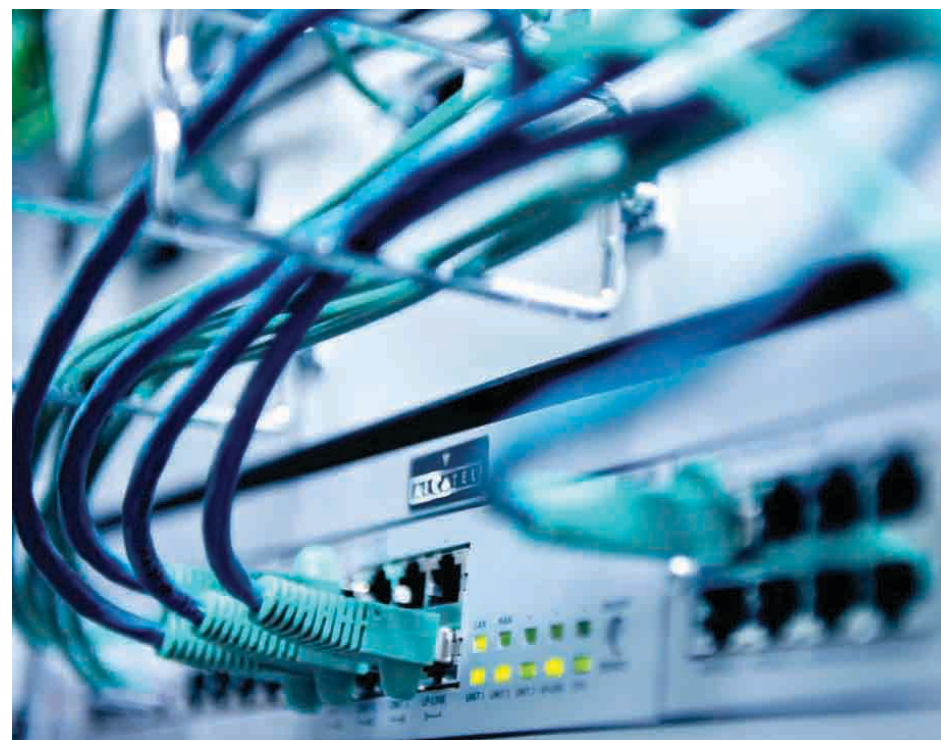
Many noted the distortions arising from the use of 'imposed' performance pressure based on National Senior Certificate pass rates in the absence of strong teacher capacity and conducive teaching conditions. However, for others, that is exactly why, despite its limitations, this model and the control and monitoring it enables is necessary until a reliable level of teacher competence and commitment can be established.

The consequences of non-compliance are clear. Recognition of the high stakes means it is largely accepted (and expected) that action is taken when someone fails to comply.

The ultimate quality assurance responsibility lies with an independent body, Umalusi.

3.6 Technical and operational systems

The examinations system is supported by well-developed electronic and information technology systems. There is stability of some of the basic underlying technical and operational systems despite centralisation, dating back to pre-1994 in some cases.



4. Which of these lessons may be applicable more broadly?

It can be argued that the security and administration of the national senior examination system is more routine and easier to standardise with clearer and less ambiguous quality standards than some of the more complex educational sub-systems related to teaching and learning. Not all of the lessons may therefore be applicable to more complex systems. However, as described, there are parts of the examination system that are more complex and so possibly are worth reflecting on more broadly.

A key lesson that has been illustrated, and supported by a well-established principle of organisational development, is that those who will be required to initiate, implement and sustain organisation improvement processes need to be at the centre of diagnostic and learning processes and decision-making. This very process of analysis and diagnostic discussion, if it is well structured and optimally inclusive, is often itself the beginning of a change process and, in fact, the condition for effective and sustained improvement. It is regarded as important that the process itself improves the level of shared 'organisational literacy', that is, an understanding of the effects of different management practices as well as the conditions necessary to achieve effective management.

The benefits of inclusive processes of planning, monitoring and evaluation for organisation improvement and development may be applicable here and elsewhere in the education system:

- If there is an understanding that evaluation is not only an accountability tool, but an institutional learning device, the value of evaluation for organisational change and development begins to emerge
- Evaluation can be used to demonstrate what an organisation is doing well
- Evaluation can be used as an input in a change process
- More than just demonstrating progress in an organisation's work, evaluation now is about influencing that progress and defining its direction.

The recognition of the urgency and importance of change needs to be accepted by a critical mass of the role-players. The perceived consequences of not making the change have to outweigh the organisational inertia that holds organisations in a steady state, rather than constantly striving for improvement.

The process of change needs to promote an on-going assessment into how improvements can be achieved, based on evidence. It should lay the ground for improved management capacity to lead processes of on-going diagnosis, learning and change.

It is clear that the effectiveness and improvement of the system is dependent on more than simply the standardisation of output targets and the extensive standardisation of procedure. A dedicated, capacitated and stable team of people is needed, with the acceptance and agreement of what the ultimate goal is, and what the consequences are for non-compliance. This needs to be enhanced by strong collaborative leadership. Systems to support delivery need to be in place. Political will can be a great enhancer of organisational performance.

4.1 Wider lessons from an organisational development perspective

The examination system has involved a very large scale transformation from a fragmented and racially skewed system into a unified system that is widely respected and acknowledged for its efficiency and effectiveness. The system has become characterised as one that strives for high standards, includes sound levels of accountability and has achieved continuous improvement over time. The case study identifies a number of factors that have enabled this positive assessment of the system. The question then becomes relevant as to whether some of these factors might be of relevance to the entire education system. The following are some of the ingredients of success that NECT and DBE would like to see discussed and possibly implemented more widely.

4.1.1 Effective integrated planning

The examination system has achieved substantial success in achieving a shared vision and strategy. This has been achieved by the involvement of a wide range of stakeholders and role-players in the process. The case study identifies some areas for improvement including the need for a Theory of Change, spending more time on identifying longer term outcomes and impact, the development of more qualitative indicators of success. It is widely acknowledged that planning within government is often not thorough or inclusive enough and the exam system is judged in the case study to be doing well

and striving to do better. Such an approach and commitment across the education system should be encouraged.

4.1.2 Recognising inter-dependencies

The examination system is on the one hand a very contained “system” with standard systems and processes and a high level of internal discipline and cohesion. On the other hand, it is dependent on first of all national and provincial departments working together to support the system, and secondly, on key elements of the education and schooling system to function well. A key example of this is the role of teachers in the examination system, and there are others. There is a need in all planning processes to examine carefully where dependencies exist and how relevant stakeholders and role-players can be engaged in planning processes.

There is also a need to identify the inter-dependencies that are very closely aligned and to ensure that they are closely linked structurally. Such structural challenges must be addressed and sound coordination arrangements put in place.

4.1.3 The role of reputation

The examination system has achieved internally a solid understanding of expectations. It has set a “zero fault” set of standards and built a reputation for coming close to a faultless exam process. When errors occur (which they do every year) there is a consciousness of reputational damage and a determination to make sure such errors are not repeated in future years. This is a cultural issue that is deeply embedded in the exam system team and it is very powerful. Consideration should be given to building reputations in schools and in the schooling system and using that to raise expectations and standards that are owned by all those involved.

It is not possible to address issues of reputation or “Brand” (as it is often referred to in the private sector) without addressing organisational culture. There is a strong sense of shared values in the exam system team that is viewed as being the glue that bonds the team together in the task of achieving its agreed goals and meeting the public expectations and maintaining its good reputation. Many in the system believe more could be done to build and strengthen these shared values and that this is not something achieved speedily or as a once off effort. Things such as reductions in staffing or failures in systems can impact on people’s commitment to these shared values and so continuous attention to this aspect is needed. There are many parts of the education system, and indeed within other governmental systems, that could benefit from work on both reputation, organisational culture and the building of a shared set of values that drives organisational performance.

4.1.4 Managing and making use of public awareness and engagement

The exam system has made extensive use of public communication to gain an understanding of its work. What this highlights is the importance of “putting out there” in the public domain, the vision and strategy and key indicators of success that one would want to be judged against. This creates a relationship between the implementers of education policy and strategy and the recipients and users of the service. One of the things that the exam system has been able to do is to manage expectations. There are important gains to be achieved by publicising what is intended and seeking public support and endorsement.

4.1.5 Addressing capacity needs in planning processes

There is a worry within the examination team that high standards have been set that will fall if the required capacity is not built and sustained. The fear is that both numbers of staff needed and the competencies of staff (management, teachers, suppliers) will not be adequate. It is important to ensure that in planning system outputs, outcomes, indicators and standards, careful consideration is given to the staffing, training and systems improvements needed to achieve them. The relationship between inputs and outputs cannot be lost or confidence and morale will be affected.



4.1.6 The importance of research and diagnostic assessment and evaluation

One of the strengths of the exam system has been the integration of extremely thorough review processes into the system. At each level an assessment is made and reports produced ensuring that lessons are learned. This is not simply where errors are made or where problems arise, but is done every year after a process or input to the exam process has been concluded. There is concern that perhaps more research could be done that goes deeper and wider and explores the relationship between exams and the education system more closely, but overall there is a sense of continuous learning and improvement based on empirical evidence. The important thing to note is that monitoring and evaluation is not a “nice to have” or an extra to be addressed if funds allow, which is often the case within government, but integrated into the work of the system. Attention needs to be given to how monitoring and evaluation can be integrated into different parts of the education system.





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