



education

Department:  
Education  
REPUBLIC OF SOUTH AFRICA

# standards

## national examination and assessment system

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Presented to the Portfolio Committee on Basic Education

18-08-2008

**What must be done**

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# STANDARDS A NATIONAL DISCOURSE

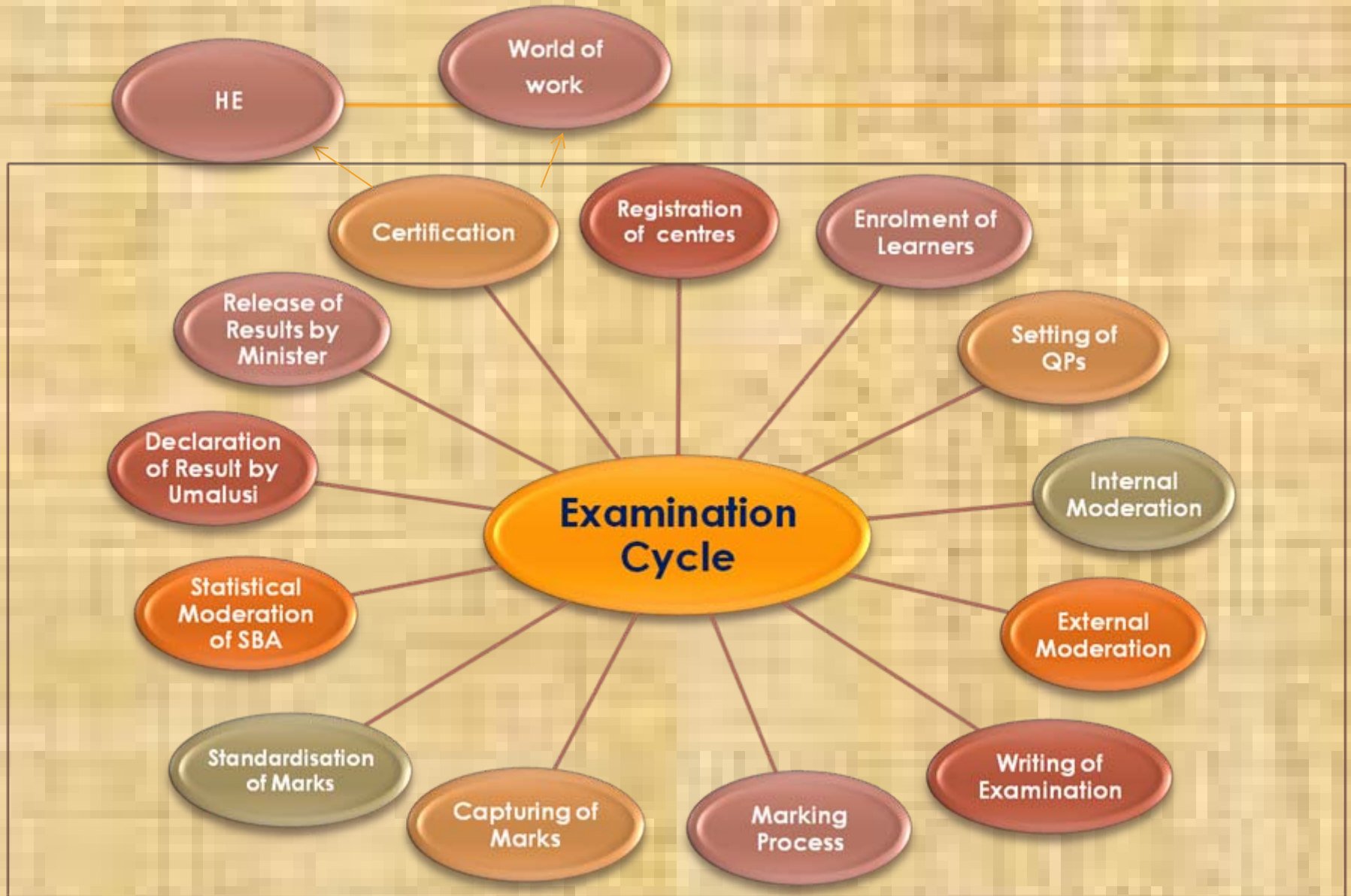
WHERE WE COME FROM  
WHERE WE ARE  
WHERE WE ARE GOING

# WHO WE ARE

Reeves (2002): Standards-based on values including fairness of methodology used to assess student performance

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# MAKING VALID EDUCATION ASESMENT JUDGEMENTS



# CHARACTERISTICS OF THE NATIONAL EXAMINATION EXAMINATION SYSTEM

Characteristics	Description	Indicator
Fitness for Purpose	The assessment instrument and the marking produces scores that are reliable and valid	<ul style="list-style-type: none"> <li>▪ Acceptance by teachers and learners that are assessments are according to policy i.e. few complaints.</li> <li>▪ Statistical evidence of the technical quality of the assessment.</li> <li>▪ Adequate quality assurance/moderation measures in place</li> </ul>
Equity, Integrity and Public confidence	The assessment is deemed fair and achieves a high level of public confidence. No candidate or group of candidates has an unfair advantage over others.	<ul style="list-style-type: none"> <li>▪ The public has confidence in the results of the assessment</li> <li>▪ High level of trust in the honesty of school.</li> <li>▪ High level of trust in the honesty of SMT.</li> <li>▪ Little evidence of candidates resorting to the use of 'unfair means' (cheating).</li> <li>▪ Examining body procedures for appeals.</li> <li>▪ The question paper does not contain culturally inappropriate questions</li> </ul>
<p><b>Making valid educational judgements</b></p>		

# CHARACTERISTICS OF THE NATION EXAMINATION SYSTEM

Characteristic	Description	Indicator
Efficiency and cost effectiveness	The examining body should deliver the required services making the best possible use of physical, financial and human resources. Assessment should be administered according to agreed plans and learners results should be made known on time.	<ul style="list-style-type: none"> <li>▪ Resources are utilised effectively.</li> <li>▪ The provincial office, district and school are efficiently staffed.</li> <li>▪ Learners results are provided in a timely manner.</li> <li>▪ Feedback on learner performance is provided on time at the different levels.</li> </ul>
Transparency	The assessment process should, as far as possible, be open to public scrutiny. Assessments should not be shrouded with mystery	<ul style="list-style-type: none"> <li>• Non-confidential materials including regulations, syllabuses and sample/past exam papers are widely available.</li> <li>▪ Marking system and criteria for award of grades available.</li> <li>▪ Reports, including statistical data, on performance in assessment available.</li> </ul>

# NATIONAL STRATEGY FOR LEARNER ATTAINMENT (NSLA)

"ENCOURAGES LEARNERS TO ATTAIN EDUCATIONAL EXCELLENCE"

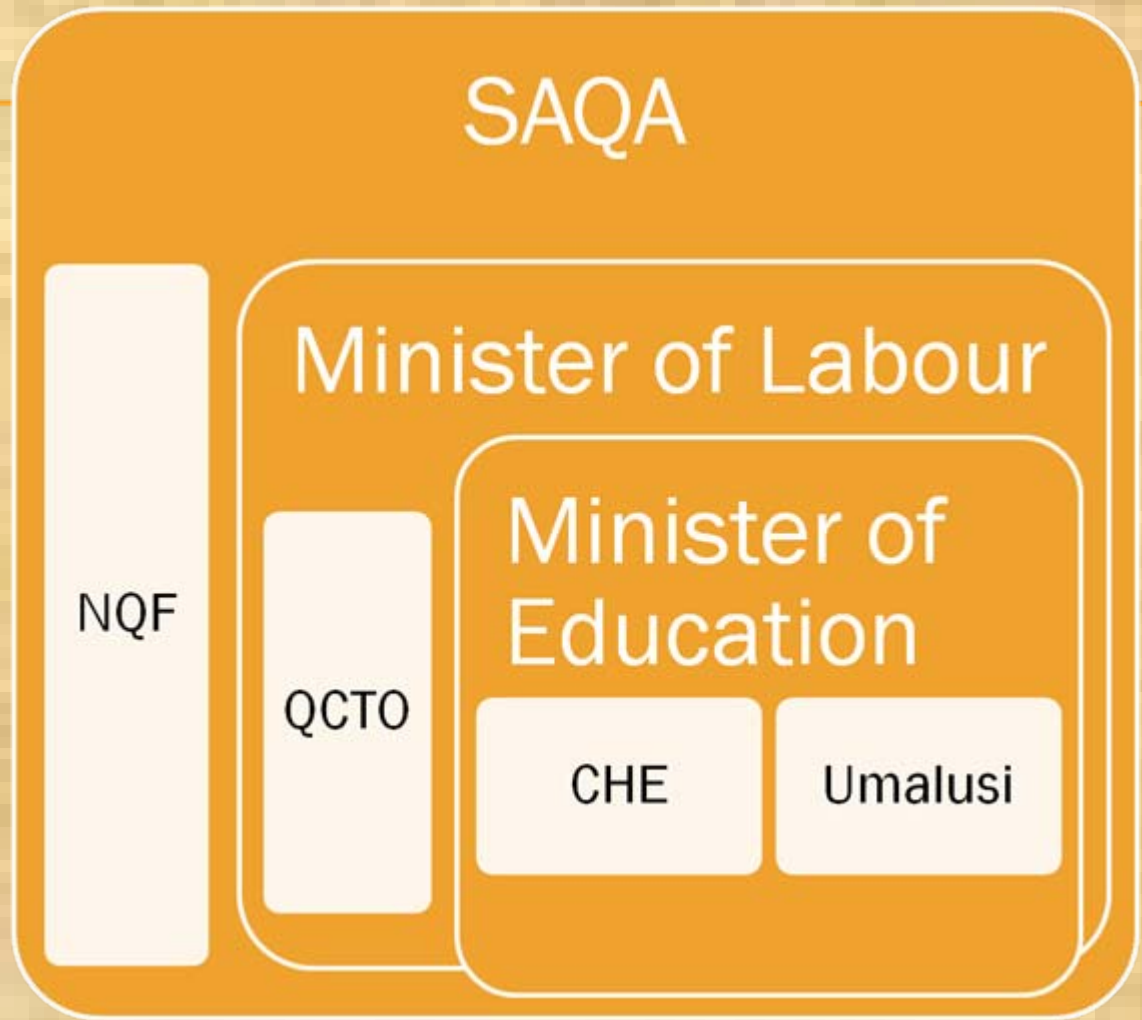
Characteristic	Description	Indicator
<p data-bbox="162 629 529 722">Beneficial Effect on classroom practice</p> <p data-bbox="222 805 618 958">National Strategy for Learner Attainment (NSLA)</p>	<p data-bbox="710 629 1116 929">The assessment system should promote good teaching and learning practices. It should include systematic feedback of information to all role players.</p>	<ul data-bbox="1180 622 1858 682" style="list-style-type: none"><li data-bbox="1180 622 1858 682">▪ High quality subject reports for teachers and other interested parties distributed</li></ul>

**MAKING VALID EDUCATION ASSESSMENT JUDGEMENTS**

# SAQA

National  
Criteria

International  
comparability



SAQA

SETTING STANDARDS TO GENERATE GLOBALLY RECOGNISED QUALIFICATIONS

# NQF BILL

## POSSIBLE IMPLEMENTATION OF THE BILL

Why new  
Bill

simpler

better

faster

### SAQA

PROMOTING SADC PROTOCOL

“NEED TO TREAT FOREIGN STUDENTS AS HOME LEARNERS”

## OVERVIEW OF THE BILL

- × Preamble: Advancement and recognition of learning to enhance the values of a democratic society and well being of citizens
- × Purpose of Bill: Provide for NQF, responsibilities of ministers, SAQA, three QCs, repeal SAQA Act of 2005
- × Application of the ACT: to qualifications offered by education institutions, skills development providers and professional designations
- × C:3- Ministers:
  - Labour: Executive responsibility for the QC for trades and occupations
  - Education: Has the overall executive responsibility for the NQF, SAQA and the two education QCs

# Quality Councils

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1. Higher Education Qualifications Sub-framework (HEQSF)
2. Occupational Qualifications Sub-framework (OQSF)
3. General and Further Education and Training Qualifications Sub-framework (GENFETQSF)  
Umalusi.

# FUNCTIONS OF QUALITY COUNCILS

- ✘ Develop and manage its QC sub-framework
- ✘ Advise Minister
- ✘ Consider level descriptors
- ✘ Develop and implement policy, criteria on qualifications, assessment, RPL, credit accumulation and transfer
- ✘ Develop qualifications and part qualifications for its sub-framework
- ✘ Quality Assurance
- ✘ Provide information to SAQA



GENFETQC

HEQC

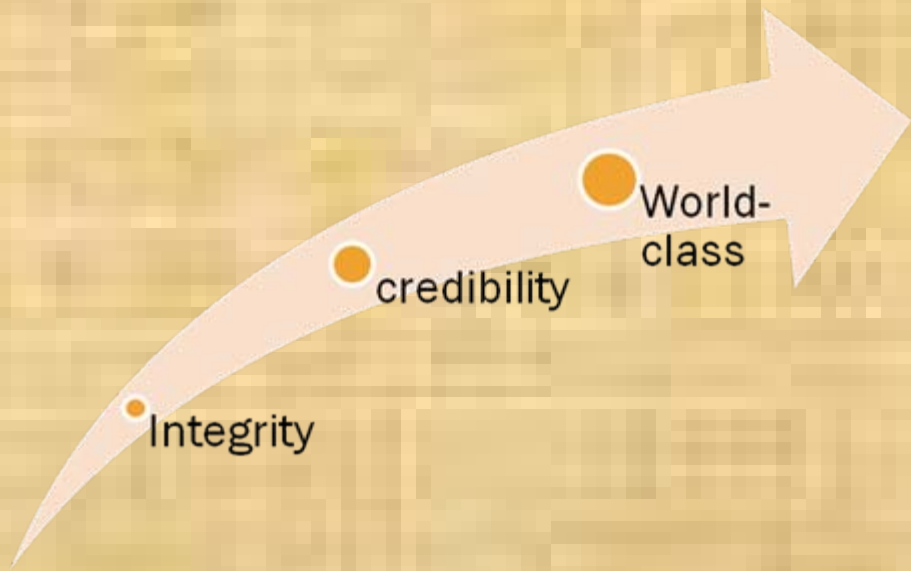
QCTO

# EXAM RESULTS?



Houses sit knocked off their foundations after an early morning landslide in Laguna Beach, California. Police said 17 homes were destroyed or seriously damaged, and about 11 others were destabilized by the slide. Many of the homes slid intact down the hillside, while some luxury mansions actually cracked in half.

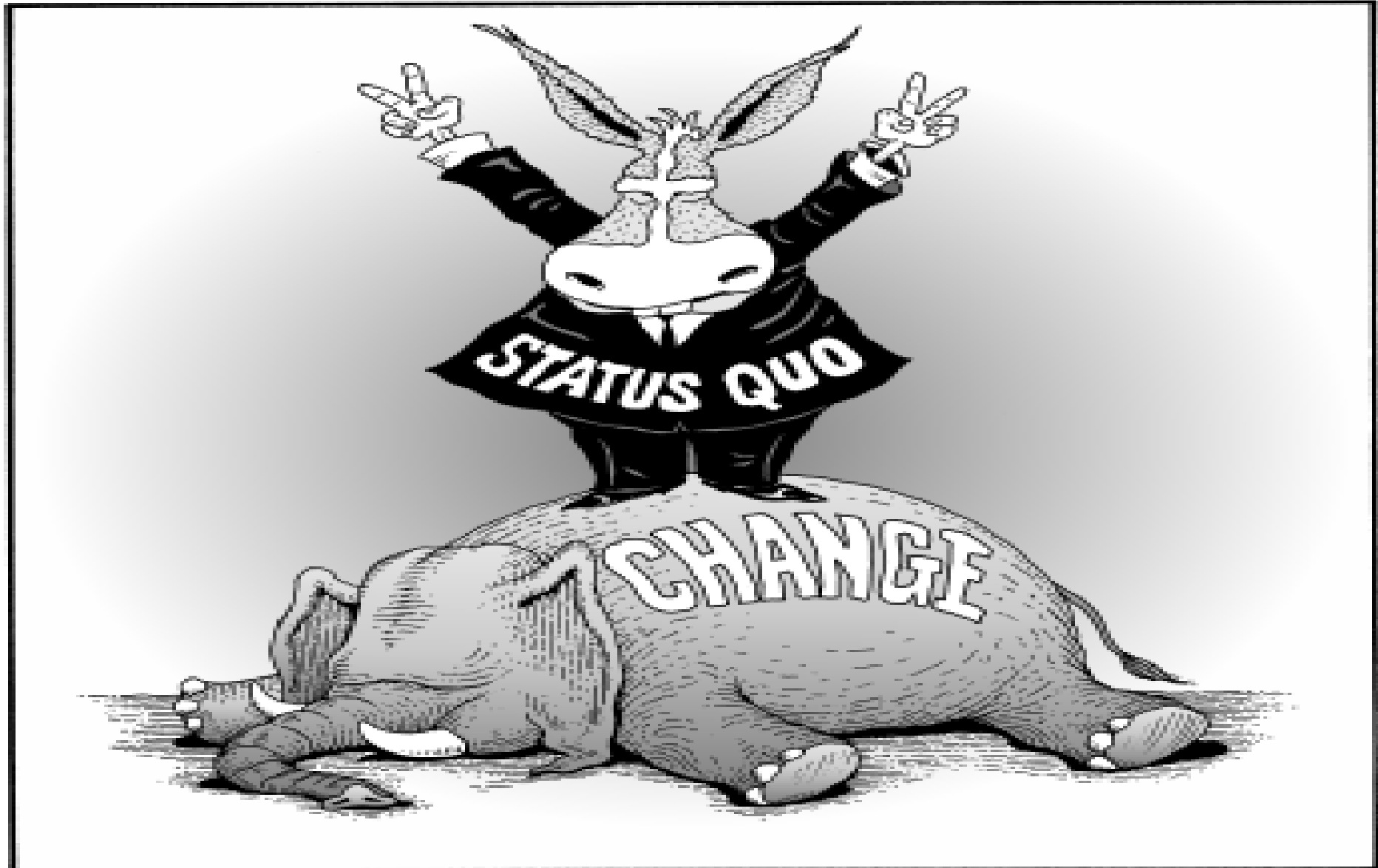
# URGENT



**SYSTEMS, PROCESSES, POLICIES AND PRACTICES FIT FOR PURPOSE**

# Now is the time

AN INDEPENDENT SOUTH AFRICAN BOARD FOR EDUCATIONAL ASSESSMENT



# ENSURING STANDARDS AND QUALITY IN QUESTION PAPERS

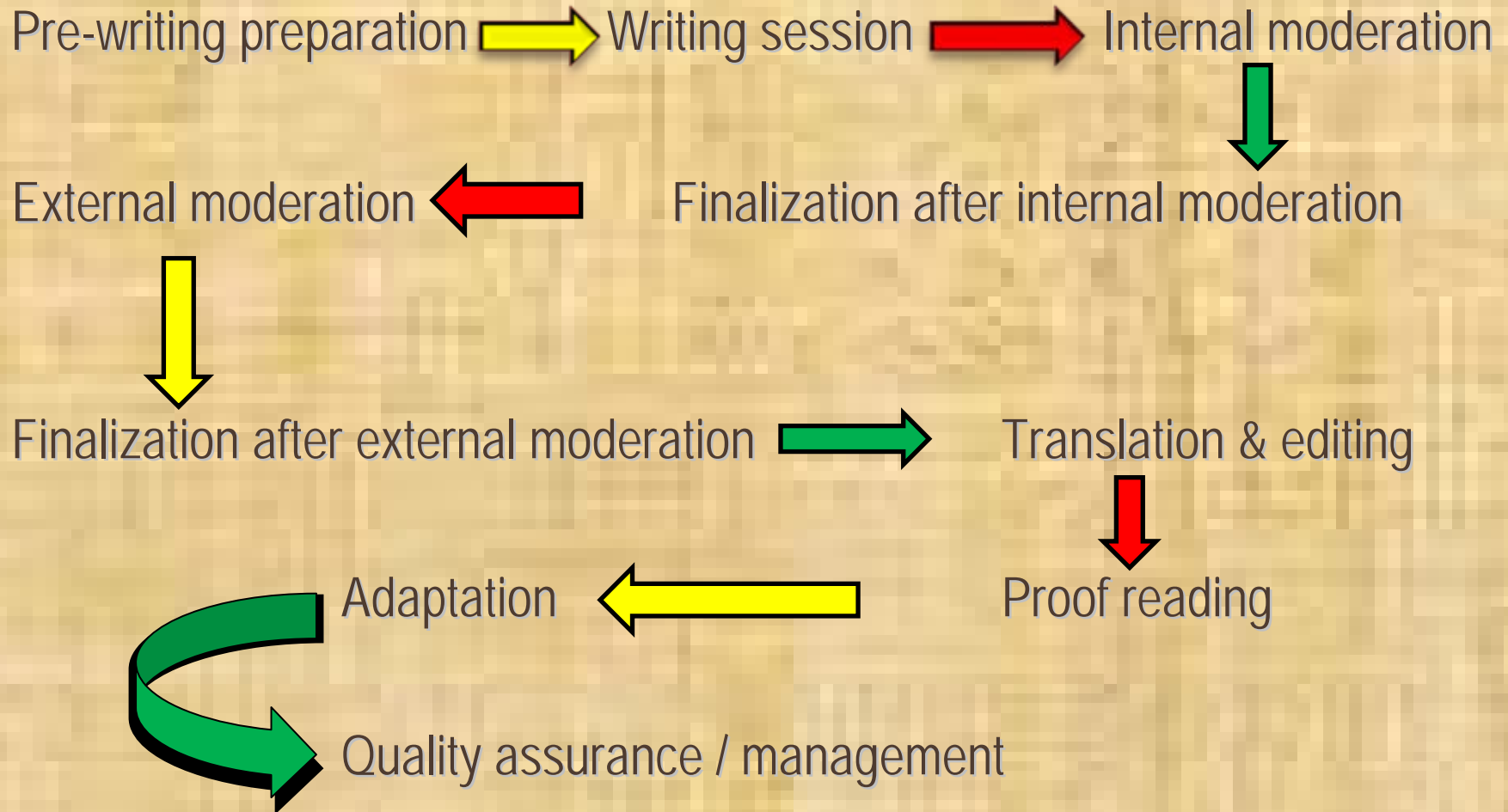
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## 1. STRICT APPOINTMENT CRITERIA FOR EXAMINERS AND MODERATORS

- Minimum qualification of examiners
  - × 3 Year degree/diploma with subject at 3<sup>rd</sup> year level
  - × Experience as educator in the particular subject or a related area
  - × At least two years' teaching Grade 12
  - × Curriculum-related experience within the last 5 years at the appropriate level
  
- + Background of examiners
  - × Subject advisors
  - × University based/lecturers
  - × Experience in setting as provincial examiners/marker

## 2. RIGOROUS SETTING & MODERATION PROCESS

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# NORM TIMES

Subject	Duration of question paper	Norm time for Setting and moderation (per paper)	Norm time for marking (minutes)
Mathematics	P1:3hrs	10 days	27
	P2:3hrs	10 days	26
	P3(optional): 3hrs	7 days	25
Physical Sciences	P1 :Physics 3hrs	10 days	30
	P2: Chemistry 3hrs	10 days	27
History	P1: 3hrs	9 days	33
	P2: 3hrs	9days	34
Accounting	3hrs	10 days	29
English First Additional Language	P1 Language	7 days	18
	P2 Literature	10 days	23
	P3 creative writing	5 days	25

# QUALITY IN TERMS OF WHAT IS ASSESSED

1. Knowledge, Skills and Values are assessed
2. Critical thinking, problem solving and Analytical skills are assessed across all subjects in addition to specific skills required in the subject
3. A wide variety of different skills are assessed across different subjects allowing each matriculant offering 7 subjects to be well grounded in a variety of skills

# APPROVED SUBJECTS AND RELATED SKILLS

Fields	Subjects	Related Skills assessed
PHYSICAL, MATHEMATICAL, COMPUTER AND LIFE SCIENCES	IT / CAT / Mathematics / Mathematical Literacy / Life Sciences / Physical Sciences	Problem solving, Critical thinking, Analytical, Technological, Information management
MANUFACTURING, ENGINEERING AND TECHNOLOGY	Engineering Graphics and Design / Electrical Tech / Civil Tech / Mechanical Tech	Manufacturing, Engineering, Construction
BUSINESS, COMMERCE AND MANAGEMENT	Accounting / Business Studies / Economics	Finance and Economic management, Book keeping, Entrepreneurial
AGRICULTURAL SCIENCES	Agric Sciences / Agric Management Practices / Agric Technology	Agricultural, Entrepreneurial

# APPROVED SUBJECTS CONTD.

Fields	Subjects	Skills
<b>ARTS AND CULTURE</b>	Dramatic Arts / Visual Arts / Music / Dance Studies / Design	Publicity, Marketing, Entrepreneurial
<b>HUMAN AND SOCIAL SCIENCES</b>	Geography / History / Religion Studies / Life Orientation	Analytical, Negotiating, Life skills
<b>SERVICES</b>	Consumer Studies / Tourism / Hospitality Studies	Entrepreneurial, Marketing,
<b>LANGUAGES</b>	11 official and 13 non-official at HL, FAL and SAL level	Communication, Publishing, Editing, Interpretation

# WHAT DOE HAS DONE

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1. Pilot examination in Grade 10 accompanied by a post-examination analysis.
2. Exemplar question papers – Grade 10, 11 and 12.
3. Nationally set question papers in Grade 11
4. Post examination analysis of Grade 11 Pilot schools
5. Examination Guidelines
6. All question papers – nationally set – Grade 12
7. Benchmarking of Grade 12 exemplars – CIE, SQA and NSW.
8. Ongoing training of examiners and internal moderators.
9. Item Banking to be piloted in 2010

# WHAT HAS BEEN DONE

## Examination administration

- Produced guidelines for:
  - × Setting of Question papers
  - × Monitoring of Examinations
  - × Marking
- Provincial co-ordination.
- Regular monitoring and support
- Establishment of the National Examination Board.
- Effective functioning of the NEIC and the PEICs.
- Establishment of the District and School Assessment Irregularities Committee.

# WHAT HAS BEEN DONE

## Marking

- Publication of exemplars of Learner Performance.
- Memo discussion – hosted nationally.
- Pre-marking of representative sample of learners' scripts.
- Evaluation of marking guideline and question papers by PEDs prior to memo discussion.
- Extension of the role of the internal moderator.
- National training of chief markers.
- More intensive control – 1 senior marker for every 5 markers.
- Moderation by the DoE.

# COMMENTS ON 2008 PAPERS

- × Comments were received from Chief markers from provinces, University, teacher unions, general public on standard and quality of question papers
- × Performance of candidates on each subject also presented feedback
- × Generally comments were that question papers were of appropriate standard, based on different cognitive levels, catered for low, medium and high achievers, adequately assessed the content as stipulated in the NCS.
- × Few exceptions ( Maths P1 and 2 too easy and Physical SC P1 too difficult)
- × Examining panels reviewed comments and have made adjustments **where necessary**
- × Question papers need to be seen in the light of progressive implementation of the curriculum

# BENCHMARKING PROJECTS

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1. Piloting of National Senior Certificate Examination Question Papers in Selected Subjects – Impact Research International (Pty Ltd).
2. The Impact of Translated Papers in the National Grade 12 Examinations into the nine official African languages of SA.
3. Comparative Analysis
4. Statistical Analysis of the Determinants of Mathematics and Science performance in the November 2007 (full time candidates) Senior Certificate examinations.

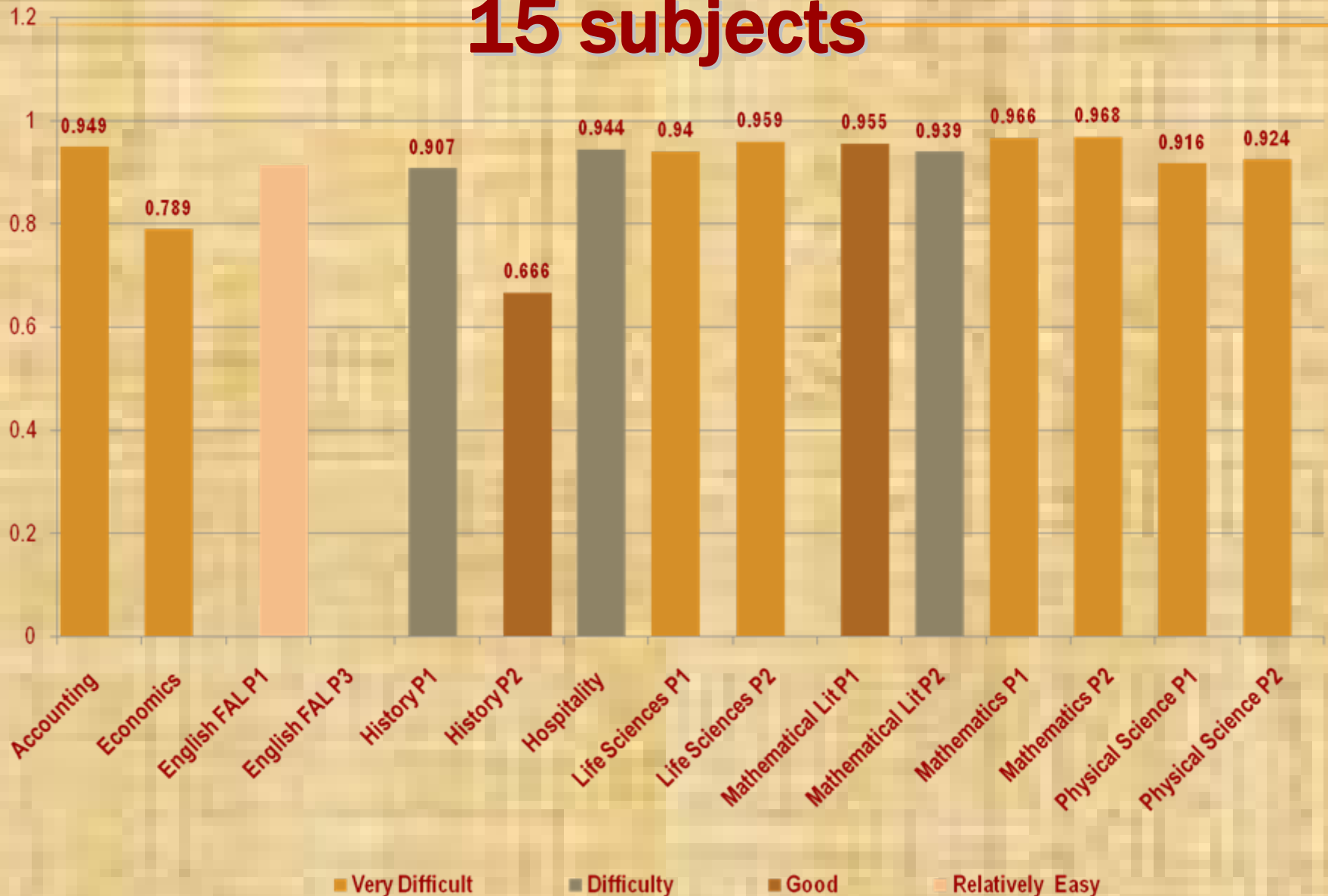
# PILOTING OF NATIONAL SENIOR CERTIFICATE EXAMINATION QUESTION PAPERS IN SELECTED SUBJECTS – IMPACT RESEARCH INTERNATIONAL (PTY LTD).

- ✘ May 2008, DoE commissioned Impact Analysis to perform an analysis of data
- ✘ Data collected in the piloting of the 2007 Grade 11 examination question papers in selected subjects in preparation for the 1<sup>st</sup> NSC examination.
- ✘ Aim – to gauge the level of performance of learners and their response to new ways of setting.
- ✘ Therefore the level of difficulty of question papers set
- ✘ 15 subjects involved in the pilot included:
  - Accounting
  - Economics
  - English FAL P1 and P3
  - History P1 and P2
  - Hospitality Studies
  - Life Sciences P1 and P2
  - Mathematics P1 and P2
  - Mathematical Literacy P1 and P2
  - Physical Science P1 and P2

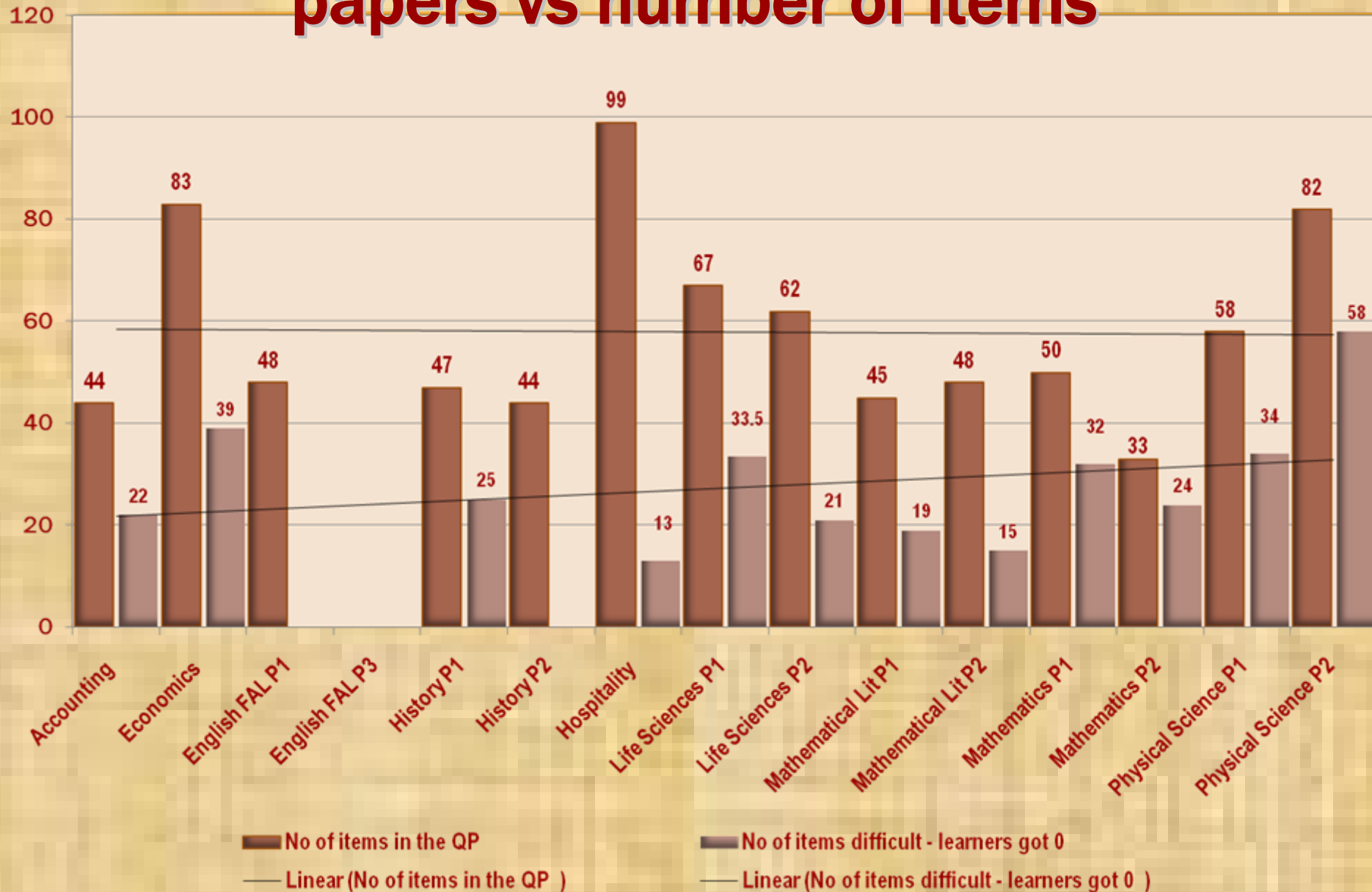
# PSYCHOMETRIC CHARACTERISTICS OF THE 15 SUBJECTS

Subject	Reliability co efficiency	No of items in the QP	No of items difficult	No of flawed items	Difficulty level
Accounting	0.949	44	22 (50%)	0	Very difficult
Economics	0.789	83	39 (45%)	10	Very difficult
English FAL P1	0.914	48		5	Relatively easy
English FAL P3				0	Relatively easy
History P1	0.907	47	25 (53%)	3	Difficult
History P2	0.666	44		1	Good
Hospitality	0.944	99	13 (13%)	16	Difficult
Life Sciences P1	0.940	67	33.5 (50%)	1	Very difficult
Life Sciences P2	0.959	62	21 (34%)	1	Very difficult
Mathematical Lit P1	0.955	45	19 (38%)	3	Good
Mathematical Lit P2	0.939	48	15 (46%)	1	Difficult
Mathematics P1	0.966	50	32 (71%)	0	Very difficult
Mathematics P2	0.968	33	24 (50%)	1	Very difficult
Physical Science P1	0.916	58	34 (58.6%)	5	Very difficult
Physical Science P2	0.924	82	58 (70.3%)	16	Very difficult

# Psychometric characteristics of the **15 subjects**



# Number of difficult items in a question papers vs number of items



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THE IMPACT OF TRANSLATED PAPERS IN  
THE NATIONAL GRADE 12 EXAMINATIONS  
INTO THE NINE OFFICIALS AFRICAN  
LANGUAGES OF SA.

# HYPOTHESIS

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- ✘ Learners' limited proficiency in English (LoLT) contribute to poor performance
- ✘ Access to examination through vernacular language leads to higher level of success
- ✘ Focus of the study
  - (a) To conduct a literature survey on practices adopted in other countries with regard to translation of examination question papers
  - (b) To analyse the quality of the translated examination papers
  - (c) To determine the impact of the translated examination papers on the performance of learners

# ASSESSMENT PRACTICES IN COUNTRIES WITH LEARNERS WHO ARE NON-NATIVE USERS OF THE EXAMINATION LANGUAGE (LEPS IN SA)

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## ✘ Nigeria

- Use of translated examination papers not a practice;
- Teachers explain question in Yoruba during the examinations.

## ✘ Wales

- No policy on using bilingual examinations
- Both Welsh and English used
- Examinations written in either of the two

## ✘ Spain

- Basque language – main language
- School leaving examinations in both Basque and Spain

## ✘ Catalonia

- Two co-official languages: Catalan and Spain
- Examinations prepared in Catalan ; but can use both of them to answer

## ✘ India

- Papers set in English and the concerned regional language for examinations.

# PAPERS TRANSLATED

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- ✘ Four question papers translated into 9 African languages
  - Biology
  - Physical Science
  - History
  - Mathematics
- ✘ 48 schools participated – mainly rural and peri-urban (township) schools
- ✘ Translated papers used in the September preparatory examinations
- ✘ Control and experiential groups wrote the papers
- ✘ Control group – given a papers written in English only
- ✘ Experiential group – bilingual papers

# MATERIALS PROVIDED

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- ✘ CentRePol commissioned to conduct the analysis
- ✘ 16 translated papers
- ✘ 11 459 assessed scripts of examinees
- ✘ Mark sheets for each subjects
- ✘ Completed questionnaires (4 for each learner and 1 for each subject teacher)

# CONT...

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- ✗ Hong Kong
  - Provides for both a Chinese and English set of question papers
  - Students choose on which medium they take examinations
- ✗ Canada
  - Mainly French, attempts to translate in English for English high schools
- ✗ USA
  - Strategies to accommodate LEP learners
  - Both non-language and language based measures

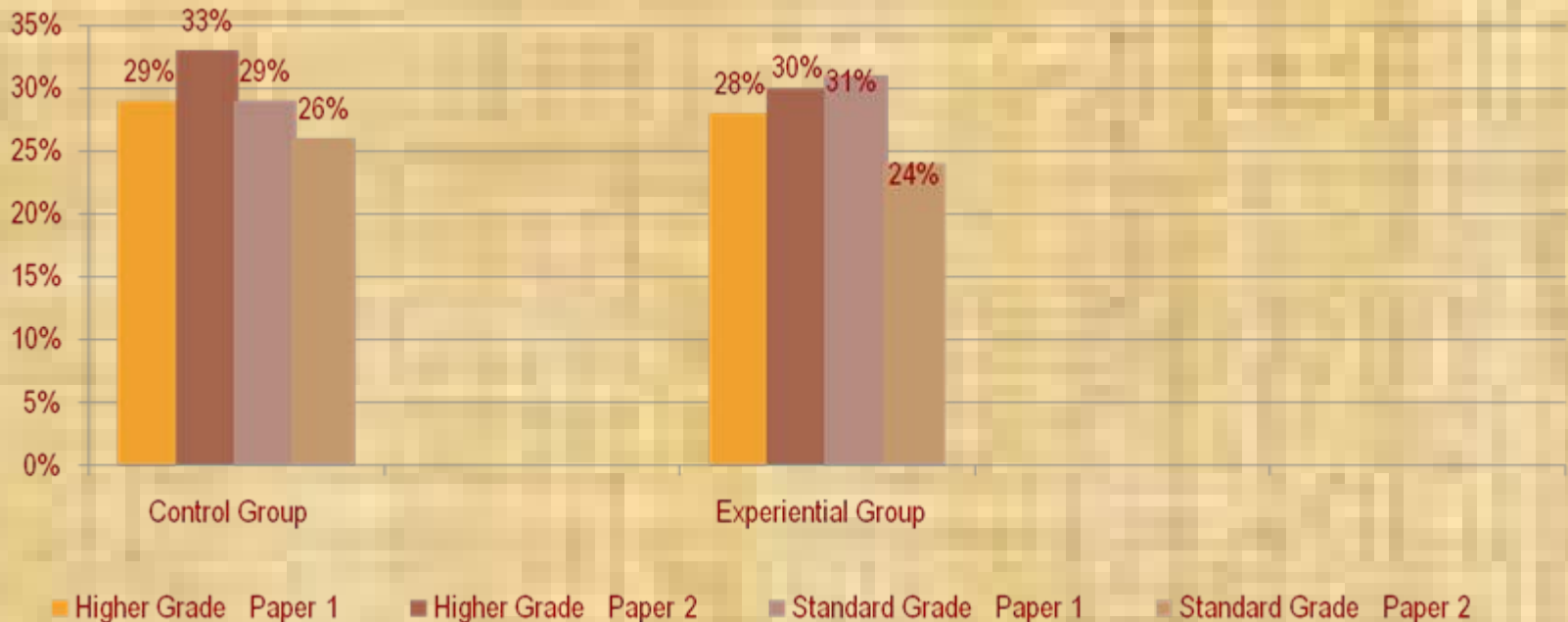
# FINDINGS

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- ✘ There is no significant difference between the performance of learners in the control and the experiential group
- ✘ Learners understanding of the subject matter is very poor
- ✘ No significant difference between the control and experiential group for either the urban or rural learners.
- ✘ Some learners were exposed to new terminology in their home language for the first time.
- ✘ Learners have no English language competence to use it effectively either as LoLT or for writing Grade 12 examinations

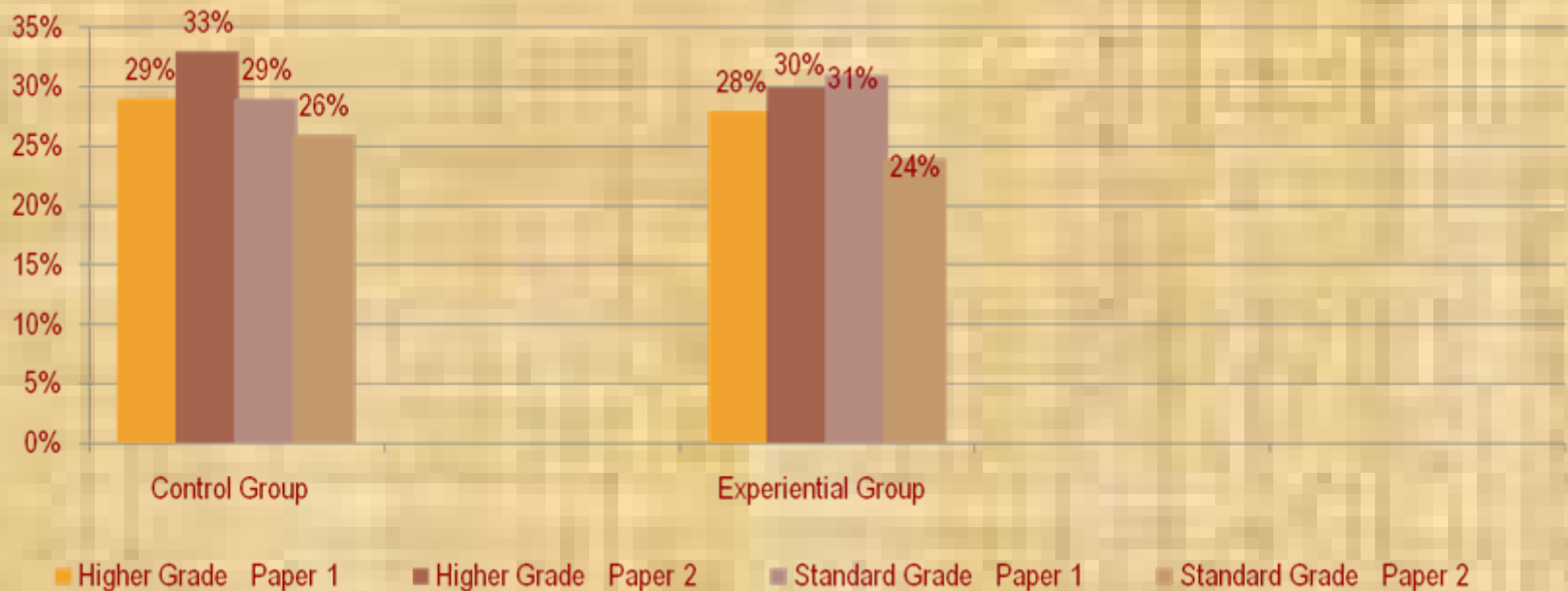
# SUBJECT ANALYSIS - MATHEMATICS

	Higher Grade		Standard Grade	
	Paper 1	Paper 2	Paper 1	Paper 2
Control Group	24%	16%	19%	15%
Experiential Group	28%	18%	18%	17%



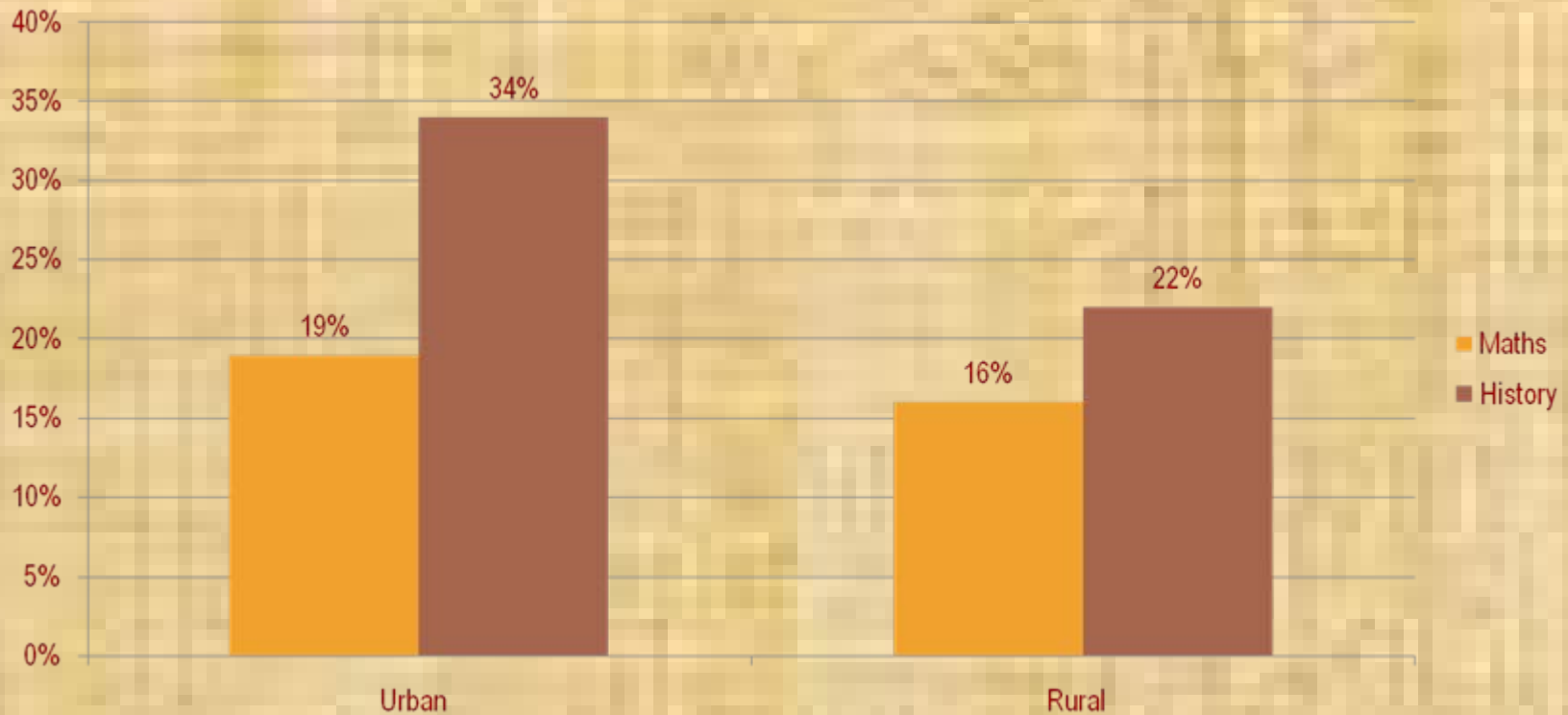
# SUBJECT ANALYSIS – HISTORY

	Higher Grade		Standard Grade	
	Paper 1	Paper 2	Paper 1	Paper 2
Control Group	29%	33%	29%	26%
Experiential Group	28%	30%	31%	24%



# URBAN/RURAL DISTRIBUTION

	Urban	Rural
Maths	19%	16%
History	34%	22%



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**COMPARATIVE ANALYSIS OF NSC NOVEMBER  
2008 QUESTION PAPERS AND SC NOVEMBER  
2007 QUESTION PAPERS IN SELECTED  
SUBJECTS**

# ANALYSIS OF EXEMPLARS AND QUESTION PAPERS

## PHYSICAL SCIENCE

PAPER/EXEMPLAR	CONTENT COVERAGE (%)	LEVEL OF DIFFICULTY	COGNITIVE LEVEL Versus LOs	TYPES OF QUESTIONS ASKED
November 2008	67% of Report 550 29% New content			63% similar to Exemplar 2008
Exemplar 2008				63% similar to Nov 2008
Report 550	67% of Nov 2008			37% of Nov 2008
November 2007	67% similar to Nov 2008.			47% of Nov 2008
COMMENT	<p><b>The information here suggests that the standard of the Nov 2008 paper was relatively similar to that of the previous papers, particularly in terms of the content coverage. However, there appears to be an incremental improvement signified by the 29% additional content.</b></p>			

# ACCOUNTING

PAPER/EXEMPLAR	CONTENT COVERAGE	LEVEL OF DIFFICULTY	COGNITIVE LEVEL Versus LOs	TYPES OF QUESTIONS ASKED
November 2008	56% new content			56% similar to Nov 2007 50% similar to Exemplar 2008
Exemplar 2008				50% similar to Nov 2008
Report 550				
November 2007	44% of Nov 2008			56% similar to Nov 2008
COMMENT	<p><b>56% new content and 44% of new types of questions for the Nov 2008 compared to the Nov 2007 suggests a serious departure from the old, perhaps even a radical move. Coupled with this is the fact that only 50% of the paper was based on the Exemplar 2008 paper. This must be a much improved paper.</b></p>			

# ENGLISH

PAPER/EXEMPLAR	CONTENT COVERAGE	LEVEL OF DIFFICULTY	TYPES OF QUESTIONS ASKED
November 2008	Similar to 2007	Comparable to Nov 2007	Similar to 2007
November 2007	Similar to Nov 2008	Comparable to Nov 2008	Similar to 2008
COMMENT	<b>All the comments here suggest that the standard of the paper has remained constant.</b>		

# HISTORY

PAPER/EXEMPLAR	CONTENT COVERAGE	LEVEL OF DIFFICULTY	COGNITIVE LEVEL Versus LOs	TYPES OF QUESTIONS ASKED
November 2008		Based on SAG Document	Conforms to SAG i.r.o LOs and ASs	Integrated questions
Exemplar 2008				
Report 550				
November 2007		Based on History National Guideline	Limits learner potential	Demarcated questions
COMMENT	<p><b>The level of difficulty, cognitive level and types of questions asked for the Nov 2008 all suggest a better paper compared to all these categories for the Nov 2007 paper. In other words, the comments speak for themselves.</b></p>			

# LIFE SCIENCES

PAPER/EXEMPLAR	CONTENT COVERAGE	LEVEL OF DIFFICULTY	COGNITIVE LEVEL Versus LOs	TYPES OF QUESTIONS ASKED
November 2008	25% New content	Paper anchored in Exemplar 2008	Weighting (60% LO skills + 40% HO skills) similar to Nov 2007.	Similar to Nov 2007
Exemplar 2008		Similar to Nov 2008		
Report 550	Reproduction was part of Grade 10/11 syllabus.			
November 2007			Weighting (60% LO skills + 40% HO skills) similar to Nov 2008.	Similar to Nov 2008

**COMMENT**

**The weighting for the cognitive levels together with the level of difficulty suggest that the overall standard of the 2008 Nov paper was similar to the level of the previous years. However, the 25% new content may suggest that the 2008 Nov paper was of a higher standard provided the standard of the questions constituting the 25% were of good quality.**

# MATHEMATICAL LITERACY

PAPER/EXEMPLAR	CONTENT COVERAGE	LEVEL OF DIFFICULTY	COGNITIVE LEVEL Versus LOs	TYPES OF QUESTIONS ASKED
November 2008	Paper anchored in Exemplar 2008 (only 4% and 1% differences for Papers 1&2 respectively)			
Exemplar 2008	Similar to Nov 2008			
Report 550				
November 2007				
COMMENT	<p><b>Too thin. Not much can be deduced from this information, excepting that if both the levels of the Exemplar 2008 and Nov 2008 papers were of high quality therefore the Nov 2008 paper would have been a better paper compared to the previous papers.</b></p>			

# ACCESS TO QUALITY EDUCATION

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Three dimensions of access:

1. Physical access
2. Epistemological access
3. Socio-cultural access