Every child is a National Asset

Lessons from the 2022 GEC PILOT

26 June 2023

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Purpose of the 2022 GEC Pilot

The main purpose of the presentation is to provide details on how the GEC pilot was conducted in 2022 and the findings for the research questions

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Research Questions

- To what extent will the DBE be able to implement the GEC assessment model in the South African context -- (Can the pilot study model be upscaled)

- How will learners perform in the integrated components of the GEC model ,SBA and Integrated Project, Standardised Curriculum tests and the inclinations - (How can we generate a holistic dashboard)

- What is the quality of marking at school on the GEC curriculum tests (How do we move from externally set tests to internally set tests)

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GEC 2022 Pilot Sampling

- A Probability Proportional to Size (PPS) random sampling was used

  A method of gathering participants for a study when the population is composed of

  several sub-groups

- Rationale - *(the probability of (randomly) selecting a school is larger, based on the number of*

  learners in the target population enrolled in the school)

- The sample was selected from 8745 schools offering Grade 9 (National Target Population)

- The DBE used Australian Council for Education Research to conduct the sampling

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GEC 2022 Pilot Sampling

- Coverage and Exclusion: based on international standards it is possible to exclude

  some schools to simplify the administration of the study

Small schools were excluded from the sampling frame (schools with an

enrolment of fewer than 20 Grade 9 students),forming 1.1% of the total

target population, well within the parameters set by International Surveys

like PISA and TIMSS, which contemplate a maximum school exclusion

equivalent 2.5% of the population

Overall Participation

Province	No Learners	No Schools	No District
WC	2 931	23	7
NC	4 474	27	6
NW	733	10	4
MP	4 870	25	4
LP	6 131	40	7
KZN	4 939	47	12
FS	4 121	23	5
EC	4 246	35	12
GP	10 973	40	16
National	**43 418**	**270**	**73**

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Responding to the 2022 GEC Pilot Study Research Questions

1. To what extent will the DBE be able to implement the GEC assessment model in the South African context -- (Can the pilot study model be upscaled)
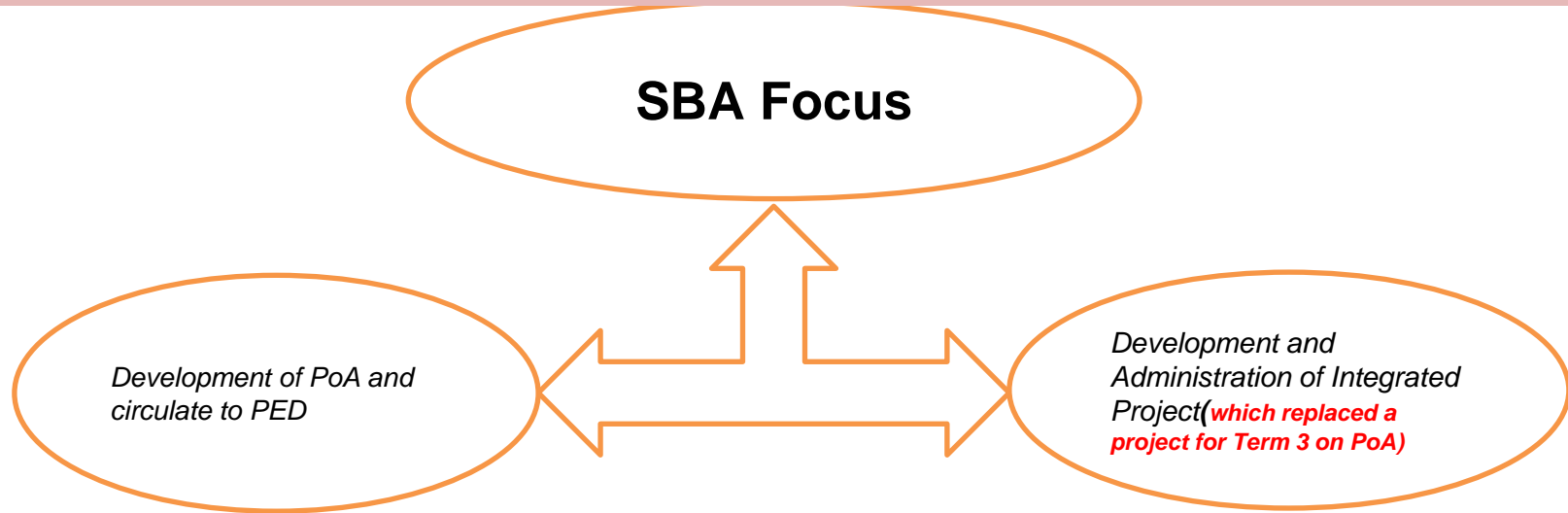
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1. Key components of the GEC Pilot

(a) SBA
(b) Inclinations and
(c) Curriculum Tests

(a) School Based Assessment

SBA Focus

Development of PoA and circulate to PED

*Development and Administration of Integrated Project(**which replaced a project for Term 3 on PoA)***

- The PoA was developed and circulated to all PEDs
- The Intergraded Project in Term 3 were developed and conducted schools
- However, the following issues were raised during consultations with the teachers and are being attended to

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School Based Assessment (Integrated Project)

Issue	Challenges	Mitigation in the 2023 Pilot
Support	Teachers were not always 100% sure what was expected of them and very there were challenges with the support	Focussed training for teachers is essential. Pprovide more guidance on which teacher does what when to curb uncertainty between subject teachers
Project integration	Different teachers need to wait on other teachers to be able to assess their part of the project	Consider to provide the pages for different subjects separately
Alignment	Project not aligned to the ATPs	Consultation meetings conducted with curriculum during the sub-committee meetings
Time	The time to complete the project was too little	The development of the project was done in consultation with curriculum
Rubrics	Rubrics not always clear on exactly what was expected from teachers	Rubrics must be clear and should also look at some alternatives coming up when teachers assess the projects. Consider marking guidelines for the project.

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21st Century Skills

The Focus of 21st Century Skills in 2022

Assessing 21st century skills to be observed when learners were working on the Integrated Project and capture learners scores on SA-SAMS .A rubric was used for scoring

- 21st century was worst affected during the 2022 GEC Pilot due the following challenges
- The DBE has since put mitigation strategies to avoid the 2022 GEC Pilot

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21st Century Skills Challenges -Teachers Perspectives

Issue	Challenges	Recommendations
Training on 21st century skills	21st Century skills training was restricted to nominated school, but came late	21st Century skills and 21st Century skills training must be an integral part of the GEC and should be addressed in the initial training to capacitate teachers on how to assess it. Teachers need continued support on 21st Century skills to be able to and assess assist learners on it.
SA-SAMS	SA-SAMS must cater for 21st Century skills capturing	21st Century skills capturing should receive training 21st Century skills should appear on the reports of learners
Rubrics	Rubrics were not clear- In spite of the two training sessions the content changed from one workshop[to the next, therefore, 21st Century skills was a challenge	21st Century skills should form part of the training. It should not come down on one teacher alone. The second training session on 21st Century skills was clearer on what needed to be done but it was very late for schools to go back and implement It is recommended that all teachers must assess 21st Century skills and then discuss and agree on 21st Century skills before it is captured

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21st Century Skills Challenges and Mitigation Strategies

Challenges	2023 Mitigation Strategies
SA-SAMS capturing model released late (in Term 4) - only 5 schools with internet connection asked to attend online training	All sampled schools will be involved in 21st century schools assessment The SA-SAMS capturing tool has been developed and should be ready for administration in term 3 of 2023
Training workshops on 21st Century not clear	More focus has been allocated to 21st century skills on training workshops both provincial and national
The reworking of 21st century skills tools (rubrics) aimed for clarity caused more confusion	User friendly observation and capturing templates have been developed
The capturing of 21st century on SA-SAMS was not successful	Training sessions to be conducted during 2023 GEC Training workshop on capturing of 21st century to be conducted on provincial level
Lack of support for the teachers on 21st century	Expanded 21st century support channels developed on TeachersConnect Teachers 2022 concerns taken into consideration during the development of 2023 tools

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(b) Inclination Assessment

The Focus of Inclination Assessment in 2022

Adopting the existing Yenza Inclinations Assessment (based on the Holland Code framework) from an online only assessment to a WhatsApp based assessment (using TeacherConnect*chat*, the DBE's WhatsApp bot

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(b) Inclination Assessment

To what extent did we achieve this

2.The inclusion Afrikaans, isiZulu, and isiXhosa to English

1.The guideline document on the inclination administration successfully developed

3.Inclinations Assessment successfully adopted on the DBE's TeacherConnectchat WhatsApp bot (automated chat)

5.Increase in participation rate compared to 2021 (59%)

4.Data collection and data analysis of assessment data in the dashboard

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Inclinations Challenges Assessment –Teachers' Perspectives

Issue	Challenges	Recommendations
Connectivity	Connectivity was a challenge to many schools	Schools should plan. Learners may complete at home or where they have access to the internet
Devices	Availability of devices to complete the quiz was a challenge to many schools	Provinces and districts to assist with device provisioning (?) Schools should plan in advance for the inclinations and spread it over the window for completion.
Results	Results is a challenge for teachers especially where learners share a device	Refinement on the Inclinations application to be able to identify learners and their schools and making reports available to schools who have completed the quiz (names of learners as well as the overarching results in terms of inclinations
Language	Learners struggle with English	Inclinations should be translated/versioned into all languages

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Inclinations Challenges and Mitigation Strategies

Challenges	2023 Mitigation Strategies
Participation: Only 59% of the sampled schools participated	Additional training and expanded support channels developed
Reporting: Given that the value of GEC is to holistically assess the learner, in 2022 -holistic view of the earner could not generated	More detailed training guide and accompanying materials have been provided to support Provinces *and* Teachers
Training : Not enough training provided on the inclination assessment with PEDs resulting in challenges in implementation	Training manual developed Report is now accompanied by suggestions for conversations based on the assessment outcomes
Languages: the report for the additional subject only questions be translated but the report could not be generated Learners struggle with language	Currently investigating possibility of using a local Inclinations of Assessment version Inclinations to be versioned into all languages
Access: The administration of inclinations in Term 4 –limited time was available due to exams Some schools had issues with network and data access	Inclinations will start in Term 3 Tra

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(c) Curriculum Tests

The Focus of Curriculum

Setting curriculum tests in five subjects and ensure all sampled schools write the curriculum tests

- Curriculum Tests set and administered successfully in all schools

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Curriculum Tests Challenges–Teachers' Perspectives

Issue	Challenges	Mitigation
Timing of the writing tests	Time- table finished very late	Writing of the tests will be aligned to the end of the year programmes in schools e.g. submission of schedule dates
Marking guideline discussions	Final Marking guideline reached schools late	Marking guideline discussions should take place later. Distribution of marking guidelines refined
Content of tests	Schools were not sure what to expect	Exemplars set for some subjects in 2023
Multiple choice questions	The feasibility of multiple choice in some subjects and time allocated to answer the questions p	Quality assurance model to be built in all curriculum tests
First Additional language	Only Afrikaans and English was available in 2022	First Additional Language must be available in all languages
Home Language	Versioning from English to other languages created many challenges	The possibility of setting context-based Home Language tests is proposed.
Exemplar tests	No Home Language exemplar tests for indigenous languages were available	Exemplar tests for all subjects should be made available. The diagnostic tests available on DBE website should be widely communicated. Material available on the Teacher Connect platform must be widely communicated

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2. Development of a Dashboard

21ˢᵗ Century Skills

The Focus for 2022 GEC Pilot

To create a platform that will effectively consolidate and present various types of assessments, providing a comprehensive view of the learners' achievements (**holistics Report Card**)

- Although the platform was successfully developed the following challenges were observed

Inclinations Challenges and Mitigation Strategies

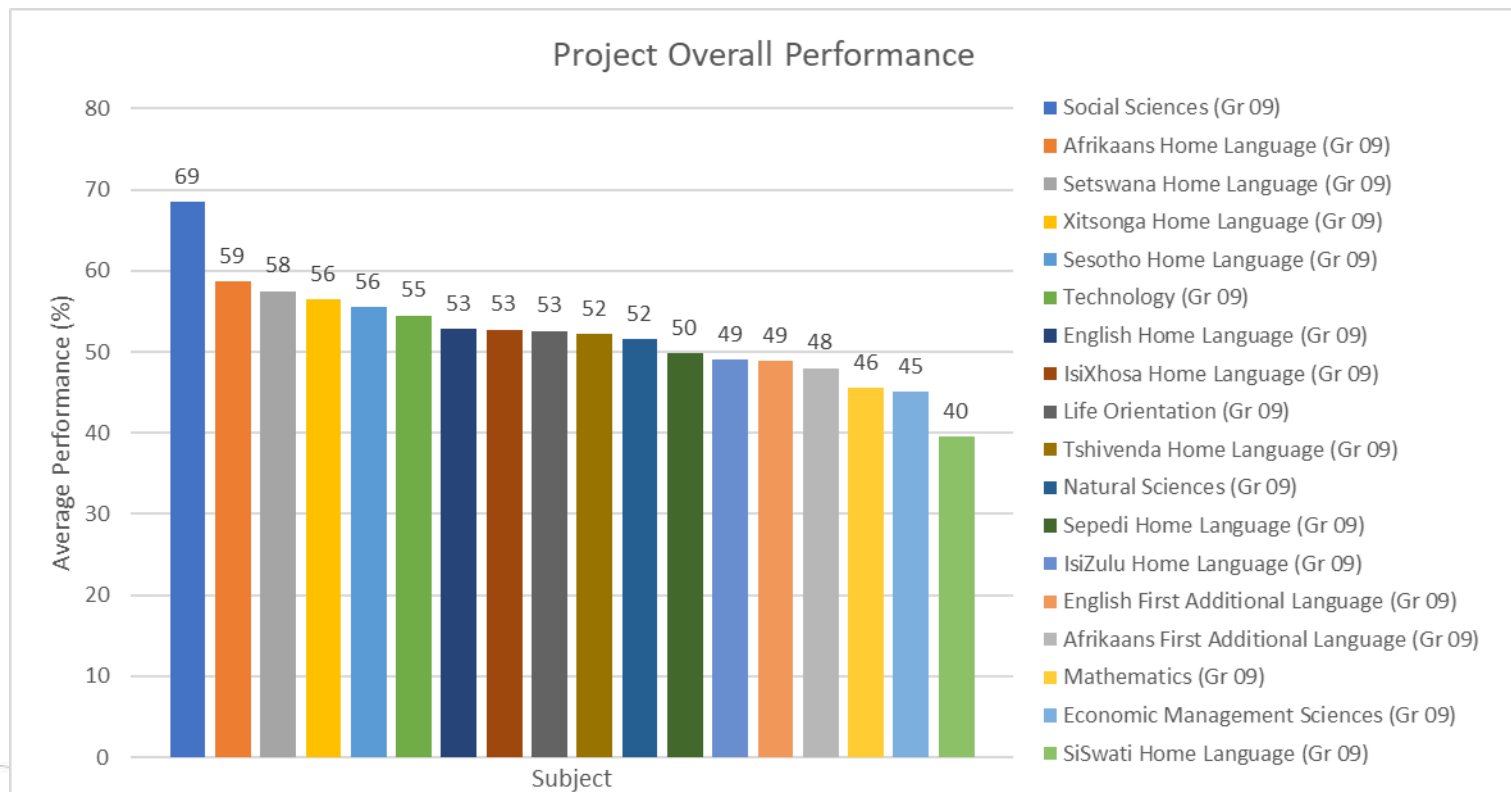| Challenges	2023 Mitigation Strategies
Quality of Data: submitted from SA-SAMS could not be successfully be imported in the dashboard due to following • Data was incomplete • Format misalignment	Regular consultation with SA-SAMS to ensure that data successful import of the 2023 data DBE will test the dashboard to be conducted before live data More detailed training guide and accompanying materials have been provided to support Provinces *and* Teachers
Integrated Project: Identification of the Integrated Task from the submitted data	
21st Century : Adapting to the use of scores in the 21st Century Skills	

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Responding to the 2022 GEC Pilot Study Research Questions

2. How will learners perform in the integrated components of the GEC model ,SBA and Integrated Project, Standardised Curriculum tests and the inclinations

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Overall Performance in the Integrated Project

Project Overall Performance

Legend:
- Social Sciences (Gr 09)
- Afrikaans Home Language (Gr 09)
- Setswana Home Language (Gr 09)
- Xitsonga Home Language (Gr 09)
- Sesotho Home Language (Gr 09)
- Technology (Gr 09)
- English Home Language (Gr 09)
- IsiXhosa Home Language (Gr 09)
- Life Orientation (Gr 09)
- Tshivenda Home Language (Gr 09)
- Natural Sciences (Gr 09)
- Sepedi Home Language (Gr 09)
- IsiZulu Home Language (Gr 09)
- English First Additional Language (Gr 09)
- Afrikaans First Additional Language (Gr 09)
- Mathematics (Gr 09)
- Economic Management Sciences (Gr 09)
- SiSwati Home Language (Gr 09)

Values: 69, 59, 58, 56, 56, 55, 53, 53, 53, 52, 52, 50, 49, 49, 48, 46, 45, 40

Y-axis: Average Performance (%)
X-axis: Subject

Overall Performance in the Integrated Project

Table above, which illustrates learners' performance before moderation,

(a) Findings

- Best performance was in Social Science with an average performance of 69%

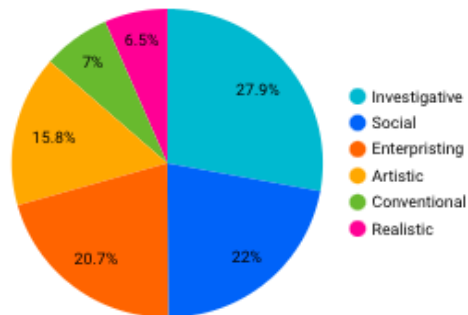- lowest performance was in Siswati HL with an average score of 40%.

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Overall Performance in the Curriculum Test

Overalll Curriculum Test at National Level

Legend:
- Xitsonga Home Language (Gr 09)
- Afrikaans Home Language (Gr 09)
- English Home Language (Gr 09)
- IsiZulu Home Language (Gr 09)
- Sepedi Home Language (Gr 09)
- Sesotho Home Language (Gr 09)
- IsiXhosa Home Language (Gr 09)
- Setswana Home Language (Gr 09)
- English First Additional Language (Gr 09)
- Afrikaans First Additional Language (Gr 09)
- Economic Management Sciences (Gr 09)
- Natural Sciences (Gr 09)
- Mathematics (Gr 09)

Values: 57, 55, 54, 51, 49, 48, 48, 47, 44, 40, 34, 33, 28

Y-axis: Average Performance (%)
X-axis: Subject

Overall Performance in Curriculum Test

Table above, which illustrates learners' performance before moderation,

(a) Findings

- Best performance was in Xitsonga HL with an average performance of 70%

- lowest performance was in Mathematics with an average score of 28%.

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Overall Performance inclination Assessment

Primary, Secondary & Tertiary Results

Primary Code Results:

- Social — 36.6%
- Investigative — 22.9%
- Realistic — 14.2%
- Artistic — 11.6%
- Enterprising — 10.8%
- Conventional
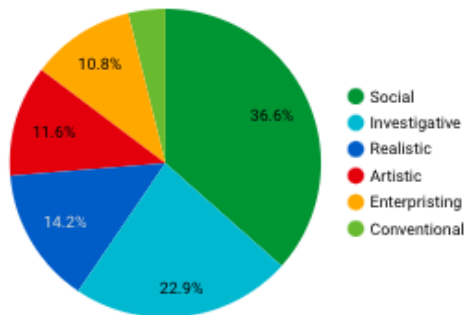
Secondary Code Results:

- Investigative — 27.9%
- Social — 22%
- Enterprising — 20.7%
- Artistic — 15.8%
- Conventional — 7%
- Realistic — 6.5%

Tertiary Code Results:

- Enterprising — 25%
- Investigative — 20.6%
- Artistic — 20%
- Social — 17.4%
- Conventional — 9.5%
- Realistic — 7.6%
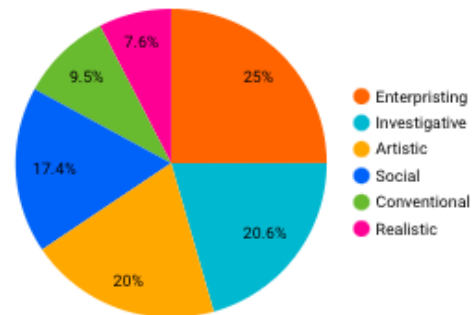
Interpreting the Inclination Assessment (Holland Code)

Realistic Type	A person who has "a preference for activities that entail the explicit, ordered, or systematic manipulation of objects, tools, machines, and animals i.e., **practical, hands on, tangible work.**
Investigative Type"	A person who has "a preference for activities that entail the observational, symbolic, systematic and creative investigation of physical, biological, and cultural phenomena i.e., **research orientated, knowledgeable, curious**.
Artistic Type"	A person who has "a preference for ambiguous, free, unsystematized activities that entail the manipulation of physical, verbal, or human materials to create art forms or products .e., **expressive, creative, visual**.
Social Type	is a person who has "a preference for activities that entail the manipulation of others to inform, train, develop, cure, or enlighten " i.e., **helping, empathetic and friendly**
Enterprising Type"	a person who has "a preference for actives that entail the manipulation of others to attain organization goals or economic gain i.e., **influential, energetic, sociable**.
Conventional Type"	a person who has "a preference for activities that entail the explicit, ordered, systematic manipulation of data (keeping records, filing materials, reproducing materials, organizing business machines and data processing equipment to attain organizational or economic goals)**... clerical, computational, and business system competencies."**

Responding to the 2022 GEC Piot Study Research Questions

3. What is the quality of marking at school on the GEC curriculum tests

(How do we move from externally set tests to internally set tests)

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Moderation of the Curriculum Test

- The DBE remarked a total of at least 200 scripts of the written curriculum tests. The aim was to verify the marking that took place at the school,

- to investigate the quality of marking and

- to investigate how the learners performed in the curriculum tests

The analysis of learners' performance was done in two different phases, where phase 1 compared learners' performance as a percentage using learners' mean score in each subject.

- **Phase 1** was aimed at investigating learners' general performances.

- **Phase 2** aimed at investigating the quality of marking for all the subjects;

- This involved investigating the number of learners' whose overall score increased, did not change, or decrease after the moderation. Phase 2 subjects

Moderation of Curriculum Test

Learners average Performance

Learners' Average Performance

Bar chart showing Before Moderation (blue) and After Moderation (red) values:
- HL: 60 / 57
- Eng Fal: 50 / 49
- Maths: 29 / 28
- EMS P1: 39 / 38
- NS: 38 / 37
- EMS P2: 38 / 40

Legend: ■ Before Moderation ■ After Moderation
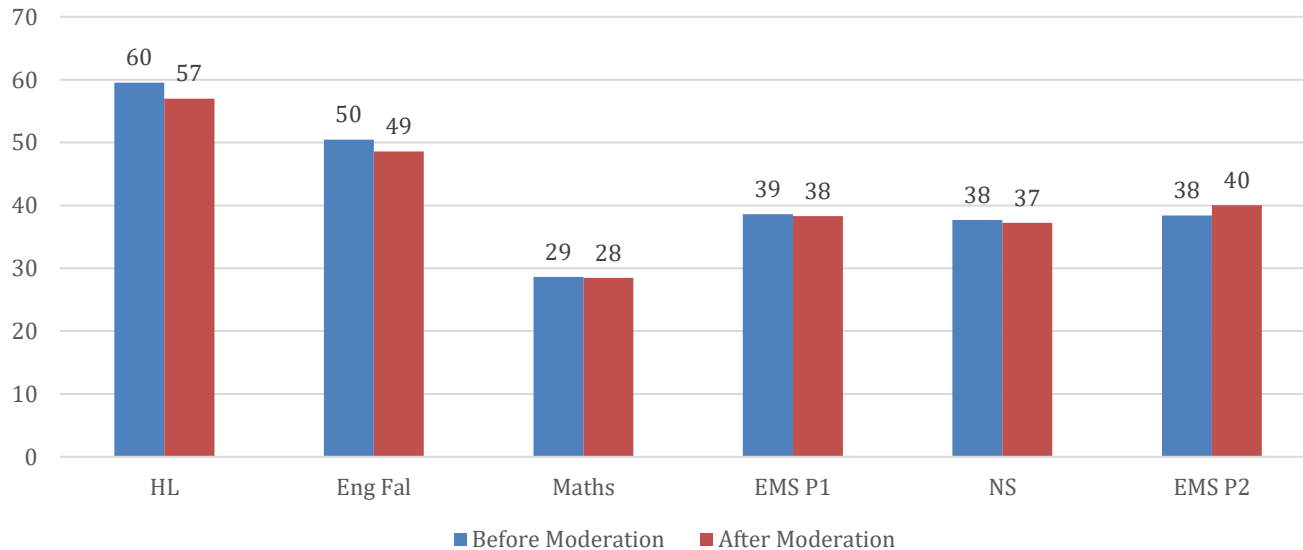
Moderation of Curriculum Tests Findings

1. Phase 1 Analysis of Learners' performance

Table above, which illustrates learners' performance before moderation,

(a) Findings

- the best performance was in Home Languages with a learner average performance of 60%, followed by the First Additional Languages with an average performance of 50% after moderation.

- Mathematics had the poorest performance with an average of 29%

- EMS P1;NS &P2 although not the worst performers, recorded a very low average performance of 39%,38% and 38% respectively.

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2.1 Phase 2 Analysis on the quality of marking

The aim was to investigate the quality of marking. The number of learners whose marks either

- increased,

- did not change,

- and decreased

after moderation as percentages per subject were analysed

Phase 2 Analysis on the quality of marking Cont:

Analysis of learners' marks after moderation

Subject	Decrease	Did Not Change	Increased	Total
AFR HL	27	41	32	274
ENG HL	24	23	53	362
ENGFAL	23	28	49	947
AFRFAL	26	42	32	219
Maths	2	81	17	988
EMS P1	21	37	43	1201
NS	21	34	45	1185
EMS P2	36	44	20	1147
ZUL HL	10	4	86	143
SEP HL	45	48	7	147
XHOHL	33	10	58	135
XIHL	8	44	48	170
SISHL	17	4	79	90
SETHL	17	11	72	144

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Quality of Marking on Content Subjects

(b) Content Subject Quality of Marking.

Content Subject Quality Of Marking Analysis
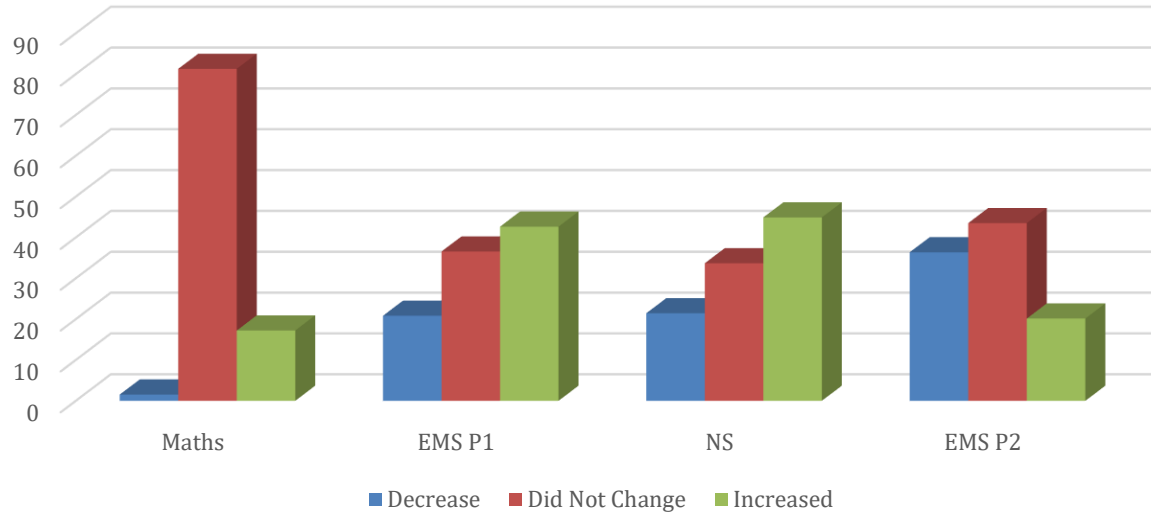
Quality of Marking: *Analysis on Home languages*

(a) Home Language Quality of Marking
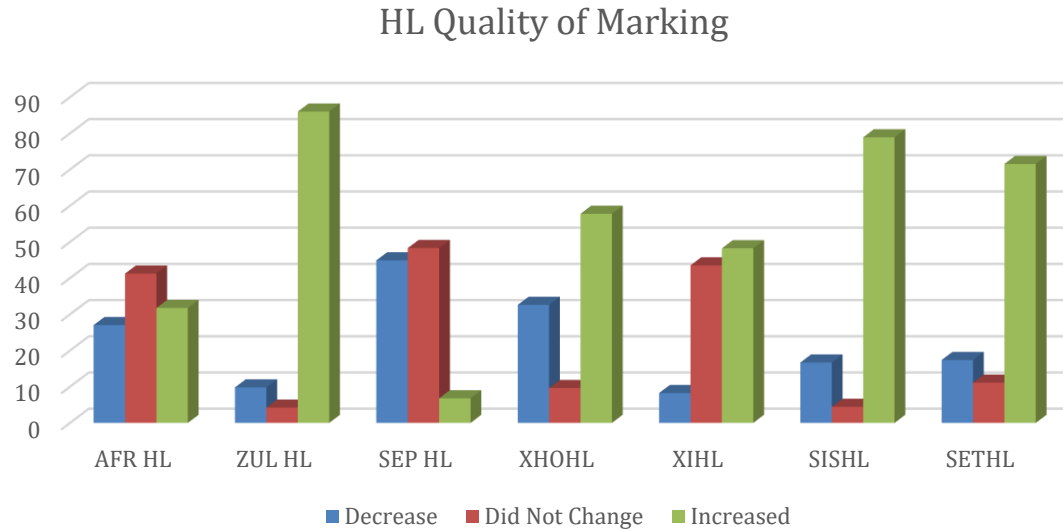
HL Quality of Marking

(b) FAL Quality of Marking

FAL Quality of Marking
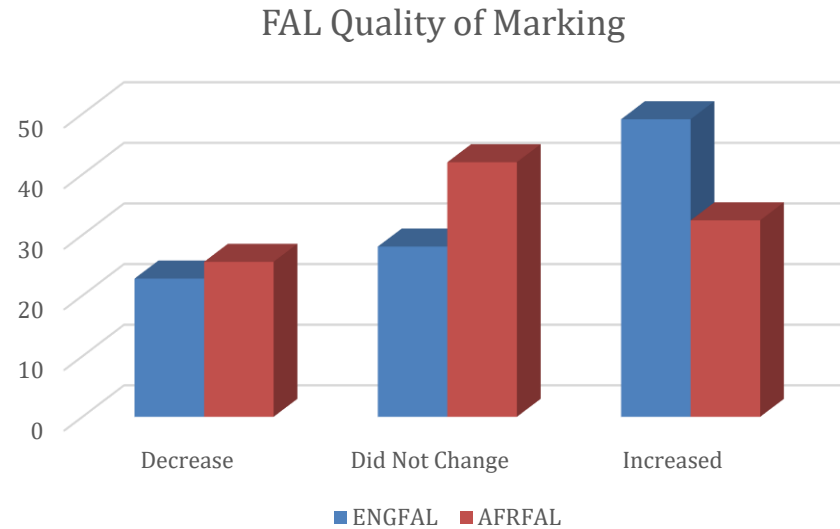
Comparing learner performance in Curriculum Test

–Sampled with Unsampled

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Comparison of Learner Performance Sampled and Unsampled Curriculum Test
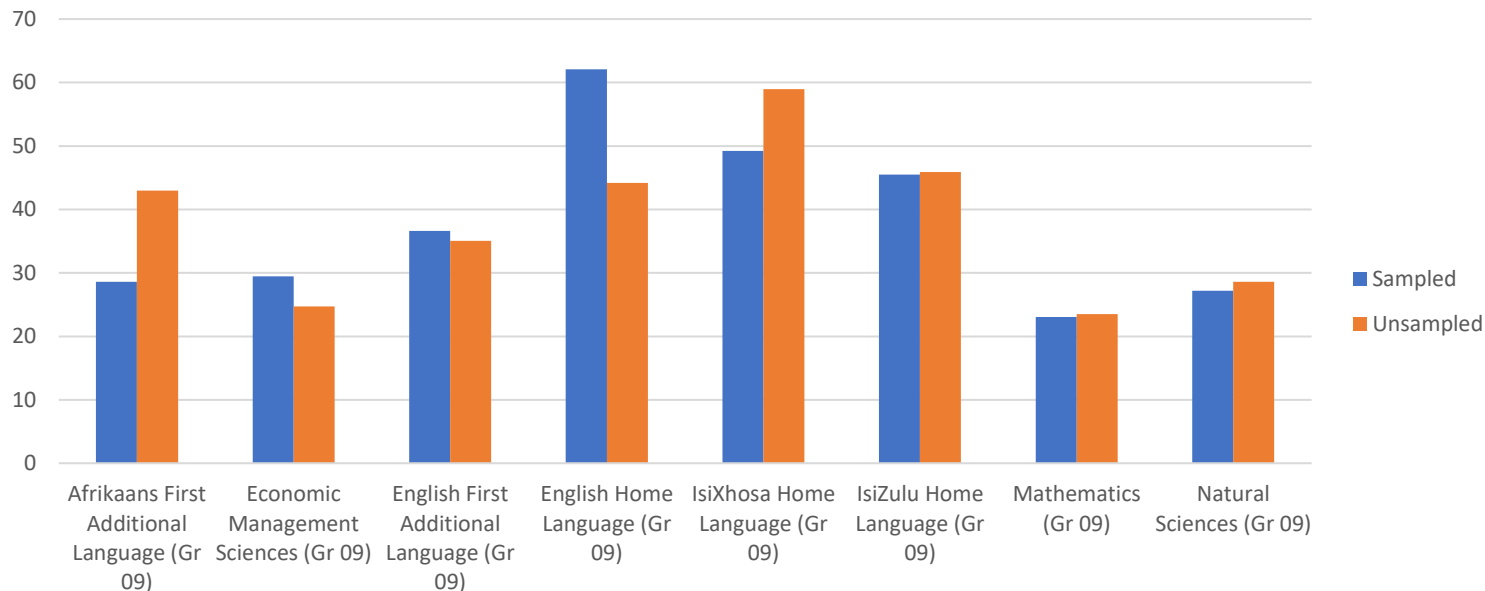
GP Curriculum Test Average Sampled Versus Non-sampled
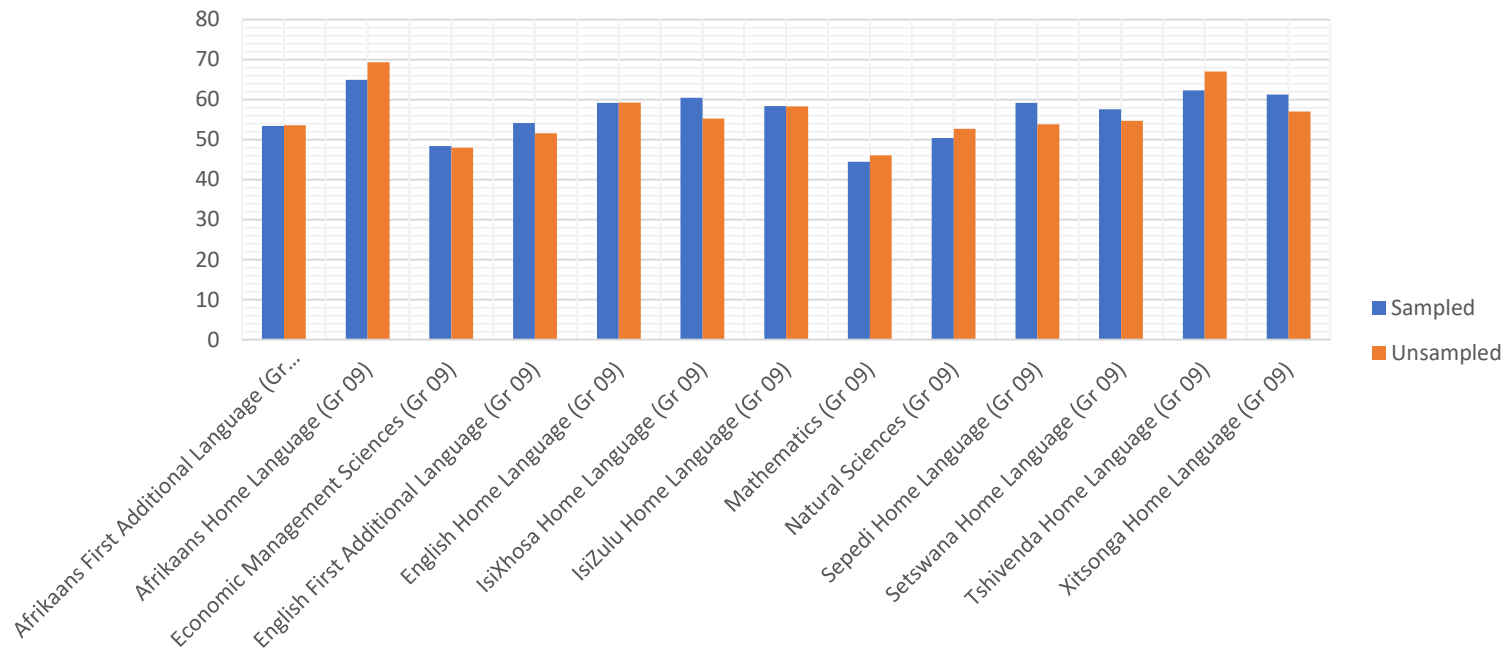
Comparison of Learner Performance Sampled and Unsampled Curriculum Test

NC Curriculum Test Average Sampled Versus Non-sampled
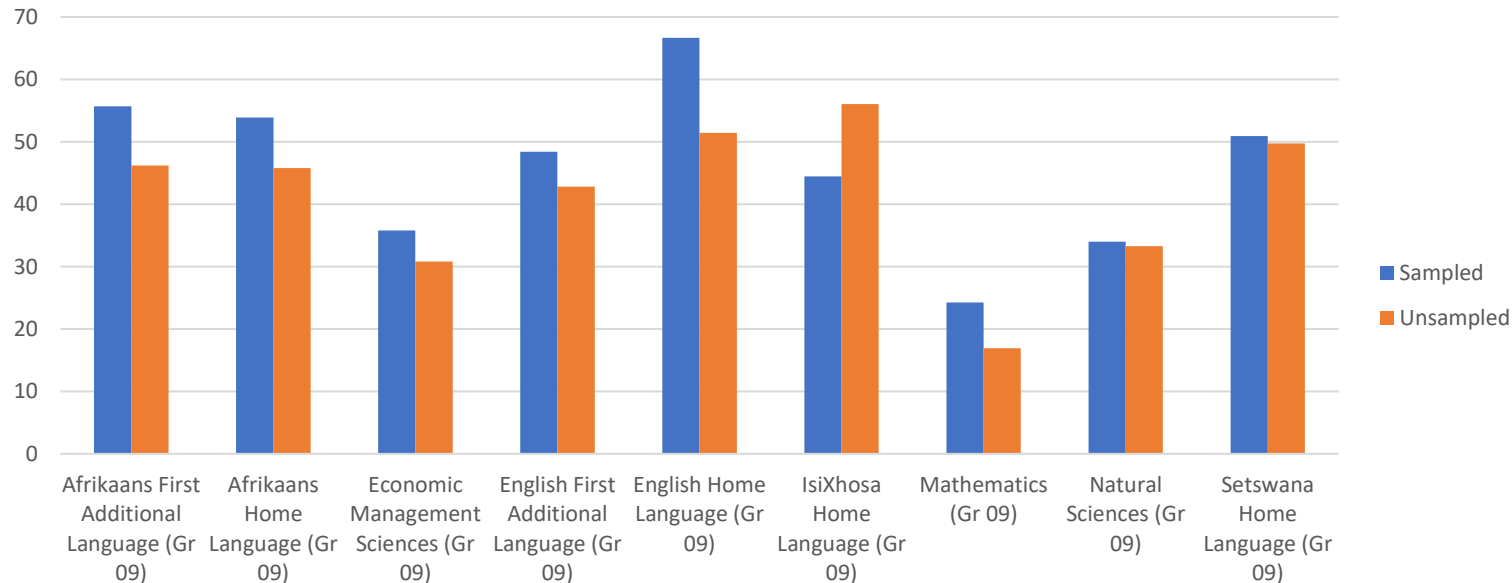
Comparison of Learner Performance Sampled and Unsampled Curriculum Test
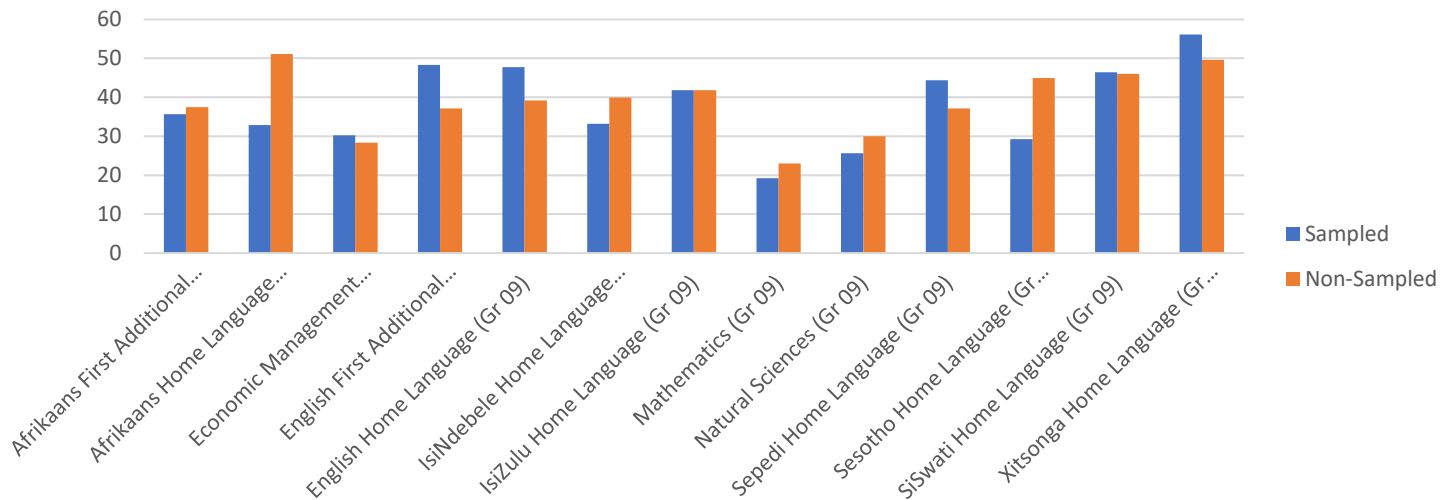

NW Curriculum Test Average Sampled Versus Non-sampled
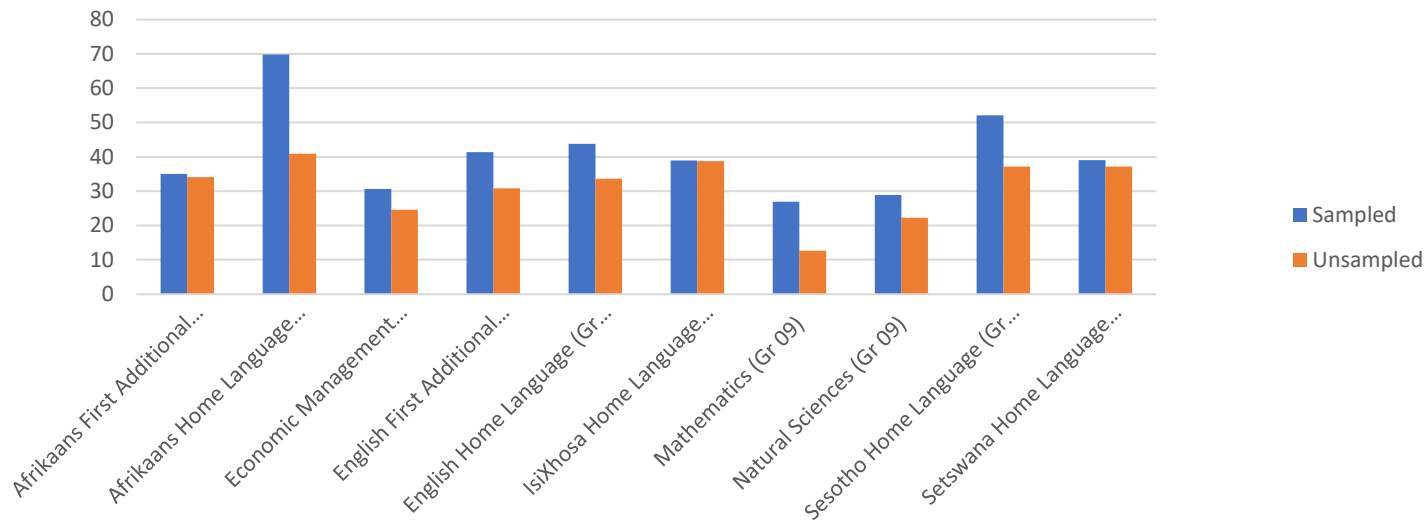
Comparison of Learner Performance Sampled and Unsampled Curriculum Test

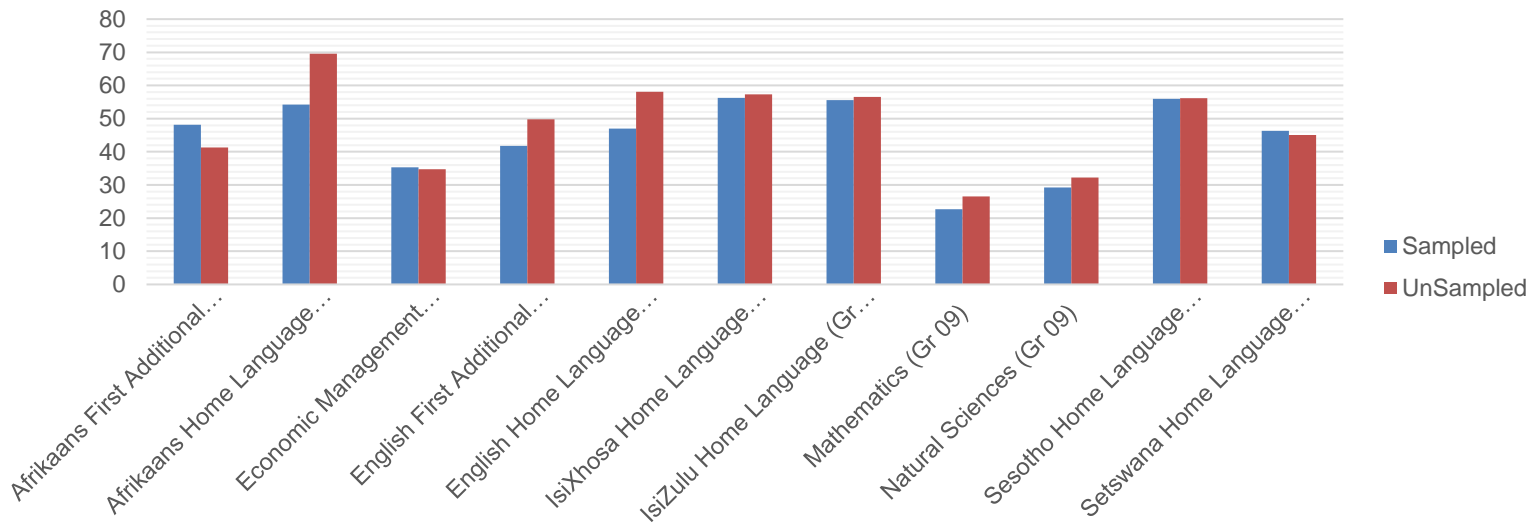KZN Curriculum Test Average Sampled Versus Non-sampled

Comparison of Learner Performance Sampled and Unsampled Curriculum Test

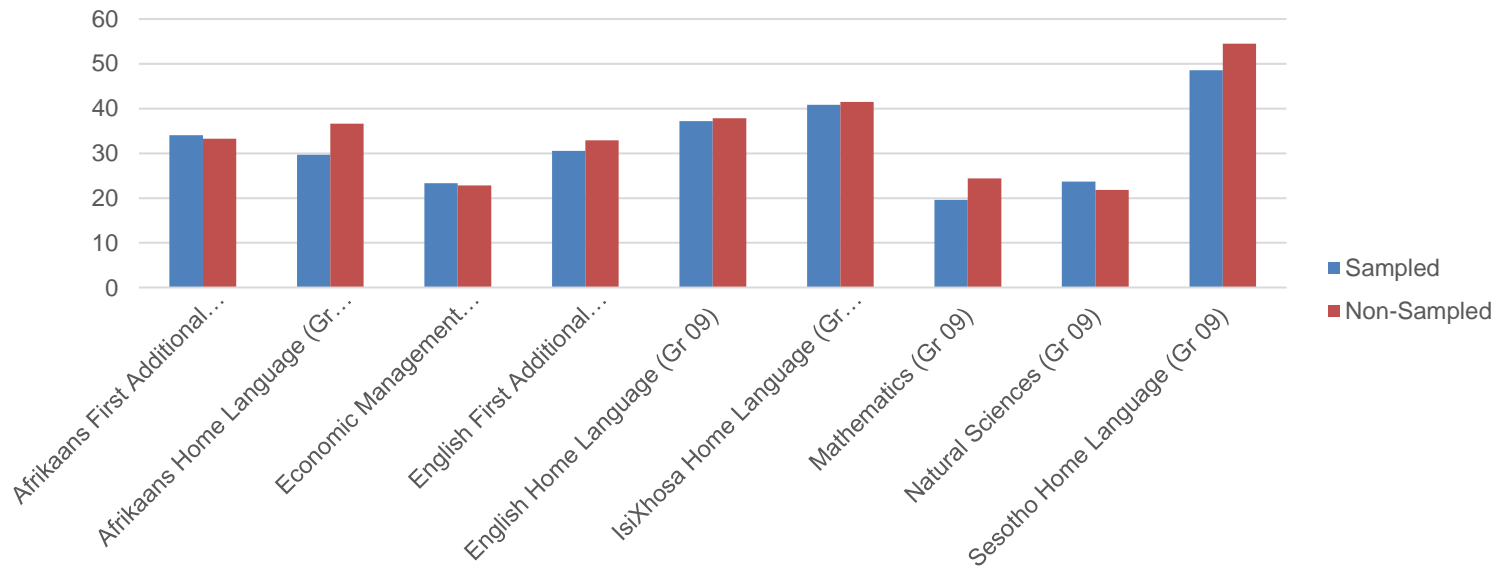MP Curriculum Test Average Sampled Versus Non-sampled

Comparison of Learner Performance Sampled and Unsampled Curriculum Test

FS Curriculum Test Average Sampled Versus Unsampled

EC Curriculum Test Average Sampled Versus Unsampled

Conclusions 2022 GEC Pilot Study Research Questions

Conclusion

- Generally, the 2022 GEC Pilot was Successfully implemented in both Curriculum Test and Integrated Project and to a lesser extent in the Inclination

- Both Curriculum Test and Integrated Projects needs to go quality assurance before administration

- The 2022 21st Century skills both assessment and capturing needs attention

- Thorough training needed if GEC is to succeed

- The development of the ICAT should start earlier on the year and curriculum should be consulted all the way

- There is need for alignment between SA-SAMS and the dashboard for GEC assessment to achieve a holistic learner reports

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Conclusion

- Learner performance in curriculum compares with learner performance from unsampled schools

- Although attention should be given to marking of languages, generally the marking at school level was of good quality

- Content subjects had the worst performance in curriculum test

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